# **EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2337	((546/143) or (514/307) or (546/141) or (514/307)).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/09/20 03:29
L2	393	1 and isoquinoline and potassium and inhibitors	US-PGPUB; USPAT	OR	OFF	2007/09/20 03:30

9/20/07 3:34:24 AM Page 1

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1612bxr

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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Web Page for STN Seminar Schedule - N. America
NEWS
NEWS
      2
         JUL 02
                 LMEDLINE coverage updated
NEWS
         JUL 02
                 SCISEARCH enhanced with complete author names
         JUL 02
NEWS
                 CHEMCATS accession numbers revised
NEWS
      5
         JUL 02
                 CA/CAplus enhanced with utility model patents from China
         JUL 16
NEWS
      6
                 CAplus enhanced with French and German abstracts
NEWS
      7
         JUL · 18
                 CA/CAplus patent coverage enhanced
         JUL 26
      8
                 USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS
      Q,
         JUL 30
NEWS
                 USGENE now available on STN
NEWS 10
         AUG 06
                 CAS REGISTRY enhanced with new experimental property tags
         AUG 06
NEWS 11
                 BEILSTEIN updated with new compounds
         AUG 06
                 FSTA enhanced with new thesaurus edition
NEWS 12
NEWS 13
         AUG 13
                 CA/CAplus enhanced with additional kind codes for granted
                 patents
         AUG 20
NEWS 14
                 CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS 15
         AUG 27
                 Full-text patent databases enhanced with predefined
                 patent family display formats from INPADOCDB
NEWS 16
         AUG 27
                 USPATOLD now available on STN
NEWS 17
         AUG 28
                 CAS REGISTRY enhanced with additional experimental
                 spectral property data
NEWS 18
         SEP 07
                 STN AnaVist, Version 2.0, now available with Derwent
                 World Patents Index
NEWS 19
         SEP 13
                 FORIS renamed to SOFIS
         SEP 13
NEWS 20
                 INPADOCDB enhanced with monthly SDI frequency
NEWS 21
         SEP 17
                 CA/CAplus enhanced with printed CA page images from
                 1967-1998
NEWS 22
         SEP 17
                 CAplus coverage extended to include traditional medicine
                 patents
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NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 01:26:17 ON 20 SEP 2007

=> file reg
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 01:26:30 ON 20 SEP 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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STRUCTURE FILE UPDATES: 18 SEP 2007 HIGHEST RN 947490-11-1 DICTIONARY FILE UPDATES: 18 SEP 2007 HIGHEST RN 947490-11-1

New CAS Information Use Policies, 'enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>

Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\ftgh.str

L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR

G1 Me, Et

Structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 01:29:10 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED -7 TO ITERATE

100.0% PROCESSED

7 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 7 TO

298 PROJECTED ANSWERS: 0 TO n

L2 0 SEA SSS SAM L1.

=> s 11 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y) /N or END:v FULL SEARCH INITIATED 01:29:14 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED -103 TO ITERATE

100.0% PROCESSED 103 ITERATIONS 1 ANSWERS

SEARCH TIME: 00.00.01

L3 1 SEA SSS FUL L1

=> file hcaplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION

FULL ESTIMATED COST 173.90 174.11

FILE 'HCAPLUS' ENTERED AT 01:29:18 ON 20 SEP 2007

Updated Search

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FILE COVERS 1907 - 20 Sep 2007 VOL 147 ISS 13 FILE LAST UPDATED: 18 Sep 2007 (20070918/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13.

L4 1 L3

=> d 14, ibib abs hitstr, 1

L4 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:300191 HCAPLUS

DOCUMENT NUMBER: 142:373697

TITLE: Preparation of isoquinoline derivatives as potassium

channel inhibitors

INVENTOR(S): Trotter, B. Wesley; Nanda, Kausik K.; Kett, Nathan R.;

Dinsmore, Christopher J.; Ponticello, Gerald S.;

Claremon, David A.

PATENT ASSIGNEE(S): Merck & Co., Inc., USA

SOURCE: PCT Int. Appl., 115 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	ID DATE	DATE			APPLICATION NO.						DATE		
WO 2005030130 A2 20050407 WO 2005030130 A3 20060119					WO 2004-US30486						20040917		
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                                                                       20040917
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                                  20061207
PRIORITY APPLN. INFO
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                                                                       20040917
                                              WO 2004-US30486
                       h0 MARPAT 142:373697
OTHER SOURCE(S):
GI
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$$R^{8}$$
 $R^{9}$ 
 $R^{10}$ 
 $R^{$ 

AB Title compds. represented by the formula I [wherein ring A = (un)substituted (hetero)aryl or heterocyclic ring; R1 = H, CN, halo, (alkyl)amino, etc.; R2, R8-R10 = independently H, halo, aminocarbamoyl, etc.; R5 = H, halo, (cyclo)alkyl, etc.; and pharmaceutically acceptable salts, crystal forms or hydrates thereof] were prepared as potassium channel inhibitors. For example, Ni-catalyzed reduction of 1-chloro-6-methoxy-4-phenylisoquinoline-3-carbonitrile and followed by condensation with formaldehyde, gave II•2HCl. I provided ≥50% inhibition at concentration ≤33 μM in the high-throughput Kv1.5 planar patch clamp assay and ≥25% inhibition at concentration ≤25 μM in the AAS (atomic absorption spectroscopy) assay. Thus, I and their pharmaceutical compns. are useful as potassium channel inhibitors for the treatment of cardiac arrhythmias, and the like.

IT 849545-74-0P

849545-74-0P RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of isoquinoline derivs. as potassium channel inhibitors) 849545-74-0 HCAPLUS

RN 849545-74-0 HCAPLUS
CN 3-Isoquinolinemethanamine, 1-chloro-6-methoxy-N,N-dimethyl-4-phenyl- (9CI)
(CA INDEX NAME)

$$\begin{array}{c} \text{Ph} \\ \text{CH}_2-\text{NMe}_2 \\ \\ \text{C1} \end{array}$$

=> file caold
COST IN U.S. DOLLARS

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
7.87
181.98

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION

CA SUBSCRIBER PRICE -0.78 -0.78

FILE 'CAOLD' ENTERED AT 01:29:31 ON 20 SEP 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907-1966 FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REG1stRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d his

(FILE 'HOME' ENTERED AT 01:26:17 ON 20 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:26:30 ON 20 SEP 2007

L1 STRUCTURE UPLOADED

L2 0 S L1

L3 1 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 01:29:18 ON 20 SEP 2007 L4 1 S L3

FILE 'CAOLD' ENTERED AT 01:29:31 ON 20 SEP 2007

=> s 13

L5 0 L3

=> file reg

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
0.45
182.43

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE TOTAL
ENTRY SESSION

CA SUBSCRIBER PRICE 0.00 -0.78

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STRUCTURE FILE UPDATES: 18 SEP 2007 HIGHEST RN 947490-11-1 DICTIONARY FILE UPDATES: 18 SEP 2007 HIGHEST RN 947490-11-1

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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http://www.cas.org/support/stngen/stndoc/properties.html

Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\asdf.str

L6 STRUCTURE UPLOADED

=> d 16 L6 HAS NO ANSWERS L6 STR

Structure attributes must be viewed using STN Express query preparation.

=> s 16

SAMPLE SEARCH INITIATED 01:31:04 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 10 TO ITERATE

100.0% PROCESSED 10 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 11 TO 389
PROJECTED ANSWERS: 0 TO 0

L7 0 SEA SSS SAM L6

=> s 16 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y FULL SEARCH INITIATED 01:31:09 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 122 TO ITERATE

100.0% PROCESSED 122 ITERATIONS 1 ANSWERS

SEARCH TIME: 00.00.01

L8 1 SEA SSS FUL L6

=>
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L9 STRUCTURE UPLOADED

=> s 19

SAMPLE SEARCH INITIATED 01:31:57 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 434 TO ITERATE

Updated Search

100.0% PROCESSED 434 ITERATIONS 7 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 7431 TO 9929
PROJECTED ANSWERS: 7 TO 298

L10 7 SEA SSS SAM L9

=> s 19 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y FULL SEARCH INITIATED 01:32:01 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 8772 TO ITERATE

100.0% PROCESSED 877.2 ITERATIONS 78 ANSWERS

SEARCH TIME: 00.00.01

L11 78 SEA SSS FUL L9

=> file hcaplus

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 345.10 527.53

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE TOTAL
ENTRY SESSION

CA SUBSCRIBER PRICE

0.00 -0.78

FILE 'HCAPLUS' ENTERED AT 01:32:04 ON 20 SEP 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 20 Sep 2007 VOL 147 ISS 13 FILE LAST UPDATED: 18 Sep 2007 (20070918/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 111

L12 33 L11

=> s 112 and trotter, b?/au

Updated Search

48 TROTTER, B?/AU

L13 2 L12 AND TROTTER, B?/AU

=> d 113, ibib abs hitstr, 1-2

L13 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2006:1252121 HCAPLUS

DOCUMENT NUMBER:

146:142484

TITLE:

Design and Synthesis of Novel Isoquinoline-3-nitriles

as Orally Bioavailable Kv1.5 Antagonists for the

Treatment of Atrial Fibrillation

AUTHOR(S):

Trotter, B. Wesley; Nanda, Kausik K.; Kett,

Nathan R.; Regan, Christopher P.; Lynch, Joseph J.; Stump, Gary L.; Kiss, Laszlo; Wang, Jixin; Spencer, Robert H.; Kane, Stefanie A.; White, Rebecca B.; Zhang, Rena; Anderson, Kenneth D.; Liverton, Nigel J.; McIntyre, Charles J.; Beshore, Douglas C.; Hartman,

George D.; Dinsmore, Christopher J.

CORPORATE SOURCE:

Departments of Medicinal Chemistry, Stroke, and Neurodegeneration Automated Biotechnology Pain Research, and Drug Metabolism, Merck Research

Laboratories, West Point, PA, 19486, USA

SOURCE:

Journal of Medicinal Chemistry (2006), 49(24),

6954-6957

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 146:142484

GΙ

AB Novel 3-cyanoisoquinoline Kv1.5 antagonists have been prepared and evaluated in in vitro and in vivo assays for inhibition of the Kv1.5 potassium channel and its associated cardiac potassium current, IKur. Structural modifications of the isoquinolinone lead afforded compds. (e.g. I) with excellent potency, selectivity, and oral bioavailability.

IT 849546-10-7P 849546-48-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of isoquinoline-3-nitriles as orally bioavailable Kv1.5 antagonists for the treatment of atrial fibrillation)

RN 849546-10-7 HCAPLUS

CN 3-Isoquinolinecarbonitrile, 1-chloro-6-methoxy-4-phenyl- (CA INDEX NAME)

RN 849546-48-1 HCAPLUS

CN 3-Isoquinolinecarbonitrile, 1-chloro-4-(3-fluorophenyl)-6-methoxy- (CA INDEX NAME)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 20

2005:300191 HCAPLUS 142:373697

DOCUMENT NUMBER: TITLE:

Preparation of isoquinoline derivatives as potassium

channel inhibitors

INVENTOR(S):

Trotter, B. Wesley; Nanda, Kausik K.; Kett,

Nathan R.; Dinsmore, Christopher J.; Ponticello,

Gerald S.; Claremon, David A.

PATENT ASSIGNEE(S):

Merck & Co., Inc., USA

SOURCE:

PCT Int. Appl., 115 pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND DATE	APPLICATION NO.	DATE
WO 2005030130	A2 200504	07 WO 2004-US30486	20040917
WO 2005030130	A3 200601	.19	
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GE, GH, GM,	HR, HU, ID, I	L, IN, IS, JP, KE, KG, H	KP, KR, KZ, LC,
LK, LR, LS,	LT, LU, LV, M	IA, MD, MG, MK, MN, MW, N	MX, MZ, NA, NI,
NO, NZ, OM,	PG, PH, PL, P	PT, RO, RU, SC, SD, SE, S	SG, SK, SL, SY,
TJ, TM, TN,	TR, TT, TZ, U	IA, UG, US, UZ, VC, VN, Y	YU, ZA, ZM, ZW

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PRIORITY APPLN. INFO .:
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                                                                            20030923
                                                  WO 2004-US30486
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                                                                            20040917
                            MARPAT 142:373697
OTHER SOURCE(S):
GΙ
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$$R^{8}$$
 $R^{9}$ 
 $R^{10}$ 
 $R^{$ 

AB Title compds. represented by the formula I [wherein ring A = (un) substituted (hetero) aryl or heterocyclic ring; R1 = H, CN, halo, (alkyl)amino, etc.; R2, R8-R10 = independently H, halo, aminocarbamoyl, etc.; R5 = H, halo, (cyclo)alkyl, etc.; and pharmaceutically acceptable salts, crystal forms or hydrates thereof] were prepared as potassium channel inhibitors. For example, Ni-catalyzed reduction of 1-chloro-6-methoxy-4phenylisoquinoline-3-carbonitrile and followed by condensation with formaldehyde, gave II-2HCl. I provided ≥50% inhibition at concentration ≤33 µM in the high-throughput Kv1.5 planar patch clamp assay and ≥25% inhibition at concentration ≤25 µM in the AAS (atomic absorption spectroscopy) assay. Thus, I and their pharmaceutical compns. are useful as potassium channel inhibitors for the treatment of cardiac arrhythmias, and the like. IT 849545-74-0P 849546-10-7P 849546-48-1P RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (preparation of isoquinoline derivs. as potassium channel inhibitors) 849545-74-0 HCAPLUS RN

RN 849546-10-7 HCAPLUS

CN 3-Isoquinolinecarbonitrile, 1-chloro-6-methoxy-4-phenyl- (CA INDEX NAME)

RN 849546-48-1 HCAPLUS

CN 3-Isoquinolinecarbonitrile, 1-chloro-4-(3-fluorophenyl)-6-methoxy- (CA INDEX NAME)

IT 849547-01-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of isoquinoline derivs. as potassium channel inhibitors)

RN 849547-01-9 HCAPLUS

CN 3-Isoquinolinecarbonitrile, 1-chloro-4-(2-fluorophenyl)-6-methoxy- (9CI) (CA INDEX NAME)

IT 849548-90-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of isoquinoline derivs. as potassium channel inhibitors)

RN 849548-90-9 HCAPLUS

CN Isoquinoline, 1-chloro-6-methoxy-3-methyl-4-phenyl- (9CI) (CA INDEX NAME)

=> d his

L5

(FILE 'HOME' ENTERED AT 01:26:17 ON 20 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:26:30 ON 20 SEP 2007

L1 STRUCTURE UPLOADED

L2 0 S L1

L3 1 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 01:29:18 ON 20 SEP 2007

L4 1 S L3

FILE 'CAOLD' ENTERED AT 01:29:31 ON 20 SEP 2007

0 S L3

FILE 'REGISTRY' ENTERED AT 01:29:39 ON 20 SEP 2007

L6. STRUCTURE UPLOADED

L7 0 S L6

L8 1 S L6 FULL

L9 STRUCTURE UPLOADED

L10 7 S L9

L11 78 S L9 FULL

FILE 'HCAPLUS' ENTERED AT 01:32:04 ON 20 SEP 2007

L12 33 S L11

L13 2 S L12 AND TROTTER, B?/AU

=> s 112 not 113

L14 31 L12 NOT L13

 $\Rightarrow$  s 114 and nanda, k?/au

270 NANDA, K?/AU

L15 0 L14 AND NANDA, K?/AU

 $\Rightarrow$  s 114 and kett, n?/au

6 KETT, N?/AU

L16 0 L14 AND KETT, N?/AU

=> s 114 and dinsmore, c?/au

118 DINSMORE, C?/AU

L17 0 L14 AND DINSMORE, C?/AU

 $\Rightarrow$  s 114 and ponticello, g?/au

111 PONTICELLO, G?/AU

L18 0 L14 AND PONTICELLO, G?/AU

=> s 114 and claremon, d?/au

140 CLAREMON, D?/AU

L19 0 L14 AND CLAREMON, D?/AU

 $\Rightarrow$  d 114, ibib abs hitstr, 1-31

L14 ANSWER 1 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2007:410660 HCAPLUS

DOCUMENT NUMBER:

146:421855

TITLE:

Preparation of 1-aminoisoquinoline derivatives as melanin concentrating receptor (MCH), particularly

MCH-1R, antagonists

INVENTOR(S):

Augereau, Jean Michel; Courtemanche, Gilles; Geslin,

Michel

PATENT ASSIGNEE(S): SOURCE:

Sanofi Aventis, Fr. Fr. Demande, 34pp.

MARPAT 146:421855

CODEN: FRXXBL

DOCUMENT TYPE:

Patent

LANGUAGE:

French

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PA	PATENT NO.				KIN	D	DATE		APPLICATION NO.						DATE		
	FR 2891825				A1 20070413					005-		-		20051012			
WO	WO 2007042668				A1 20070419			WO 2006-FR2285					20061011				
	W:	ΑE,	AG,	AL,	AM,	AT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
		CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
		GE,	GH,	GM,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KM,	KN,	KP,
		KR,	ΚZ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,	MN,
		MW,	MX,	MY,	ΜZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RS,
		RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	sv,	SY,	ТJ,	TM,	TN,	TR,	TT,	TZ,
		UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	zw							
	RW:	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	ΗU,	ΙE,
		IS,	IT,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,
		CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	TG,	BW,	GH,
		GM,	KE,	LS,	MW,	MZ,	NΑ,	SD,	SL,	SZ,	ΤZ,	ŪG,	ZM,	ZW,	AM,	ΑZ,	BY,
		KG,	ΚZ,	MD,	RU,	ТJ,	TM										
PRIORIT	IORITY APPLN. INFO.:									FR 2	005-	1041	0	1	A 20	0051	012

OTHER SOURCE(S):

$$R^7$$
 $R^2$ 
 $R^2$ 
 $R^2$ 
 $R^2$ 
 $R^2$ 
 $R^2$ 
 $R^2$ 

AB Title compds. I [ R = H, cyclo/fluoro/alkyl, CH2C.tplbond.CH, etc.; R1 = (un)substituted (hetero)aryl; R2 = H, alkyl; R4 = H, alkyl, (un)substituted heterocyclyl, (hetero)aryl, etc.; R7 = H, halo, alkyl, alkoxy, CO2H, CN, NH2 and derivs., etc.; X, Y = independently H, alkyl; or X and Y are joined by a single bond, or an alkylene group; and their acid addition salts, and their hydrates and solvates, and their enantiomers, diastereomers, and their mixts.] were prepared as melanin concentrating receptor

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(MCH), particularly MCH-1R, antagonists. Thus, amination of 7-bromo-1-chloroisoquinoline with N-[1-[(2-naphthyl)methyl]piperidin-4-yl]amine and acidulation of the aminoisoquinoline with HCl gave II+2HCl. I displayed IC50's < 1  $\mu\text{M}$  in a radioligand assay for MCH-1R. I are MCH-1R antagonists, and their compns. are useful for treating obesity, metabolic disorders, anxiety, depression, etc. (no data).

IT 934265-05-1P, 1-Chloro-4-(4-chlorophenyl)-7-methoxyisoquinoline
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(intermediate; preparation of 1-aminoisoquinoline derivs. as melanin concentrating

receptor 1 antagonists)

RN 934265-05-1 HCAPLUS

CN Isoquinoline, 1-chloro-4-(4-chlorophenyl)-7-methoxy- (CA INDEX NAME)

REFERENCE COUNT:

2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2006:978927 HCAPLUS

DOCUMENT NUMBER:

145:348613

TITLE:

Methods of screening for agents for the treatment of postmenopausal vulvovaginal atrophy by analysis of

effects on marker gene expression

Wyeth, John, and Brother Ltd., USA

INVENTOR(S):

Crabtree, Judy Sue; Harris, Heather Anne; Jelinsky,

Scott Alan; Zhang, Xiaochun; Peano, Bryan John

PATENT ASSIGNEE(S):

PCT Int. Appl., 109pp.

SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PA	PATENT NO.				KIND DATE			APPLICATION NO.					DATE				
WO.	WO 2006099610				A2 20060921			WO 2006-US9995					20060316				
	W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
		CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KM,	KN,	KP,	KR,
		ΚZ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,	MN,	MW,	MX,
		MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,
		SG,	SK,	SL,	SM,	SY,	ТJ,	TM,	TN,	TR,	TT,	ΤZ,	UA,	UG,	US,	UZ,	VC,
		VN,	YU,	ZA,	ZM,	zw											
	RW:	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	ΙE,
		IS,	IT,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,
		CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	TG,	BW,	GH,
		GM,	KE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	ΑZ,	BY,
		KG,	ΚZ,	MD,	RU,	ТJ,	TM										
US	US 2006216295				A1		2006	0928		US 2	006-	3777	56		2	0060	316
PRIORIT	PRIORITY APPLN. INFO.:									US 2	005-	6626	63P		P 2	0050	317
										US 2	005-	6889	46P		P 2	0050	609
OTHER SOURCE(S):				MARPAT 145:34861													

Methods for the identification of effector mols. useful in the treatment of vulvovaginal atrophy by anal. of their effects on the expression of atrophy-related genes is described. Methods of treating vulvovaginal atrophy comprising administering the effector mols. are also disclosed.

IT 808118-15-2D, salts, esters, prodrugs

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (for treatment of vulvovaginal atrophy; methods of screening for agents for treatment of postmenopausal vulvovaginal atrophy by anal. of effects on marker gene expression)

RN 808118-15-2 HCAPLUS

CN Glycine, N-[(1-chloro-4-phenyl-3-isoquinolinyl)carbonyl]- (9CI) (CA INDEX NAME)

L14 ANSWER 3 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN ·

ACCESSION NUMBER:

2004:1080867 HCAPLUS

DOCUMENT NUMBER:

142:56195

TITLE:

Preparation of isoquinolinecarboxamides and their use in mediating hypoxia inducible factor and increasing

endogenous erythropoietin

INVENTOR(S):

Arend, Michael P.; Flippin, Lee A.; Guenzler-Pukall, Volkmar; Ho, Wen-Bin; Turtle, Eric D.; Du, Xiaohui

PATENT ASSIGNEE(S):

SOURCE:

Fibrogen, Inc., USA

PCT Int. Appl., 302 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

LANGUAGE:

Patent English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PAT	TENT	NO.			KIN	ID DATE			APPLICATION NO.			NO.	DATE					
WO	WO 2004108681 A1 20					20041216 WO 2004-US17773						20040604						
	W:	AE,	AG,	AL,	AM,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	ΒZ,	CA,	CH,	
		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,	
							ID,											
							LV,											
							PL,											
		ТJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW	
	RW:	BW,	GH,	GM,	KΕ,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	ΤZ,	UG,	ZM,	ZW,	AM,	
		AZ,	BY,	KG,	ΚZ,	MD,	RU,	ТJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	
							GR,											
		SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,	
		SN,	TD,	ΤG											•			
	2004																	
	2528				A1		2004								20040604			
	2004						2004								20040604			
EΡ	1644				A1		2006									040		
	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙT,	LI,	LU,	NL,	SE,	MC,	PT,	
							RO,											HR
	2004		55		. A		2006			BR 2								
	1816				Α						604							
						T 20061130 JP 2006-515202 20040604												
						A 20061013 IN 2005-KN2370 20051124												
MX	2005	PA13	116		А		2006	0720		MX 2	005-	PA13	116		2	0051	205	

NO 2006000024	Α	20060130	NO	2006-24		20060103
US 2006217416	A1	20060928	US	2006-442727		20060526
US 2007155784	A1	20070705	US	2006-549571		20061013
US 2007185159	A1	20070809	US	2007-624949		20070119
PRIORITY APPLN. INFO.:			US	2003-476420P	P	20030606
			US	2003-476519P	P	20030606
			US	2003-476633P	P	20030606
		•	US	2003-476811P	P	20030606
			US	2004-861082	A1	20040604
			WO	2004-US17773	W	20040604

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II

OTHER SOURCE(S):

MARPAT 142:56195

GI

$$R^{3}$$
 $R^{5}$ 
 $R^{13}$ 
 $R^{13}$ 
 $R^{11}$ 
 $R^{12}$ 
 $R^{12}$ 

AB Title compds. I [ wherein q = 0 or 1; p = 0 or 1; Ra = COOH or -WR8; W = 0O, S(0)n or NR9; R8, R9 = H, (un)substituted alkyl or (hetero)aryl; n = 0-2; R1 = H, (un)substituted alk(yl/oxy), amino or sulf(a/i/o)nyl; R2, R3 = H, (un)substituted alk(yl/oxy), (hetero)aryl, aryloxy, sulf(a/i/o)nyl, halo, OH or cyano; R4, R5 = H, halo, (un) substituted alk(y1/oxy) or (hetero)aryl, R = H, D or Me; R11 = H, D or (un)substituted alkyl; R12 = H or alkyl; R13 = H, (un)substituted (cyclo)alkoxy or aryloxy; et al., with some limitations, and pharmaceutically acceptable salts, esters and prodrugs thereof] were prepared For example, 6-benzyloxy-1-chloro-4hydroxyisoquinoline-3-carboxylic acid underwent HATU-mediated coupling reaction with L-alanine Me ester hydrochloride followed by basic hydrolysis to give compound II. I were reported to be active in several biol. assays (no data). Compds. I and their pharmaceutical compns. are useful in mediating hypoxia inducible factor (HIF) and in treating erythropoietin-associated conditions, such as anemic and neurol. disorders, by increasing endogenous erythropoietin.

IT 808118-15-2P, [[(1-Chloro-4-phenylisoquinolin-3-

yl)carbonyl]amino]acetic acid

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of isoquinolinecarboxamides as modulators of hypoxia inducible factor and endogenous erythropoietin) 808118-15-2 HCAPLUS

RN

CN Glycine, N-[(1-chloro-4-phenyl-3-isoquinolinyl)carbonyl]- (9CI) (CA INDEX NAME)

IT 808118-13-0P, 1-Chloro-4-phenylisoquinoline-3-carboxylic acid ethyl ester 808118-14-1P, [[(1-Chloro-4-phenylisoquinolin-3-

yl)carbonyl]amino]acetic acid methyl ester

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of isoquinolinecarboxamides as modulators of hypoxia inducible factor and endogenous erythropoietin)

RN 808118-13-0 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, ethyl ester (9CI) (CA INDEX NAME)

RN 808118-14-1 HCAPLUS

CN Glycine, N-[(1-chloro-4-phenyl-3-isoquinolinyl)carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

REFERENCE COUNT:

5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2003:906475 HCAPLUS

DOCUMENT NUMBER:

140:106853

TITLE:

Predicting the Genotoxicity of Polycyclic Aromatic Compounds from Molecular Structure with Different

Classifiers

AUTHOR(S):

He, Linnan; Jurs, Peter C.; Custer, Laura L.; Durham,

Stephen K.; Pearl, Greg M.

CORPORATE SOURCE:

Department of Chemistry, The Pennsylvania State University, University Park, PA, 16802, USA

SOURCE:

Chemical Research in Toxicology (2003), 16(12),

1567-1580

CODEN: CRTOEC; ISSN: 0893-228X

American Chemical Society

DOCUMENT TYPE:

Journal

PUBLISHER:

LANGUAGE: English Classification models were developed to provide accurate prediction of

genotoxicity of 277 polycyclic aromatic compds. (PACs) directly from their mol. structures. Numerical descriptors encoding the topol., geometric, electronic, and polar surface area properties of the compds. were calculated to represent the structural information. Each compound's genotoxicity was represented with IMAX (maximal SOS induction factor) values measured by the SOS Chromotest in the presence and absence of S9 rat liver homogenate. The compds.' class identity was determined by a cutoff IMAX value of 1.25-compds. with IMAX > 1.25 in either test were classified as genotoxic, and the ones with IMAX  $\leq 1.25$  were nongenotoxic. Several binary classification models were generated to predict genotoxicity: k-nearest neighbor (k-NN), linear discriminant anal., and probabilistic neural network. The study showed k-NN to provide the highest predictive ability among the three classifiers with a training set classification rate of 93.5%. A consensus model was also developed that incorporated the three classifiers and correctly predicted 81.2% of the 277 compds. It also provided a higher prediction rate on the genotoxic class than any other single model.

IT 195512-04-0, 3-tert-Butyl-1-chloro-4-[3-

(trifluoromethyl)phenyl]isoquinoline

RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study)

(predicting genotoxicity of polycyclic aromatic compds. from mol. structure with different classifiers)

RN 195512-04-0 HCAPLUS

CN Isoquinoline, 1-chloro-3-(1,1-dimethylethyl)-4-[3-(trifluoromethyl)phenyl]-(CA INDEX NAME)

REFERENCE COUNT:

49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2002:670166 HCAPLUS

DOCUMENT NUMBER:

138:153423

TITLE:

Design, syntheses and biological evaluations of

nonpeptidic caspase 3 inhibitors

AUTHOR(S): Kim, Eun-sook; Yoo, Sung-eun; Yi, Kyu Yang; Lee,

Sunkyung; Noh, Jae-sung; Jung, Yong-Sam; Kim, Eunhee;

Jeong, Nakcheol

CORPORATE SOURCE: Department of Chemistry, Division of Chemistry and

Molecular Engineering, Korea University, Seoul,

136-701, S. Korea

SOURCE: Bulletin of the Korean Chemical Society (2002), 23(7),

1003-1010

CODEN: BKCSDE; ISSN: 0253-2964

PUBLISHER: Korean Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:153423

GI

$$\mathbb{R}^1$$

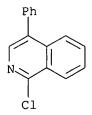
AB Novel caspase 3 inhibitors were designed , based on the active sites of the enzyme and their inhibitory activity was evaluated. The arylisoquinolines (I, R = OMe, R1 = H; R = H, R1 = OMe), their N-oxides, and the methiodide of I [R = OMe, R1 = H] showed significant inhibitory effects (>50%).

IT 65810-96-0P, 1-(4-Chlorophenyl)isoquinoline
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(preparation of aryl-, arylcarbamoyl-, and aryloxyisoquinolines as caspase 3 inhibitors)

RN 65810-96-0 HCAPLUS

CN Isoquinoline, 1-chloro-4-phenyl- (6CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT:

THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2001:851122 HCAPLUS

DOCUMENT NUMBER:

135:371759

TITLE:

Preparation of N-imidazolylphenyl-5,6-

dihydrobenzo[h]quinazolin-4-amines and other

N-containing heterocyclic amines as

5-hydroxytryptamine antagonists for treatment of CNS

disorders

INVENTOR(S):

Yamada, Akira; Spears, Glen; Hayashida, Hisashi;

Tomishima, Masaki; Ito, Kiyotaka; Imanishi, Masashi

Fujisawa Pharmaceutical Co., Ltd., Japan

SOURCE:

PCT Int. Appl., 154 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT ASSIGNEE(S):

PATENT NO.					KIND DATE		APPLICATION NO.					DATE					
						-											
WO	2001	0878	45		A2	A2 20011122			WO 2001-JP4002					20010514			
WO	WO 2001087845				А3		2002	0829									
	W:	ΑE,	AG,	AL,	AM,	AT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,	CN,
		CR,	CU,	CŻ,	DE,	DK,	DM,	DZ,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,
		ΗU,	ID,	IL,	IN,	.IS,	JP,	KE,	KG,	KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,	LU,
		LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	ΜZ,	NO,	ΝZ,	PL,	PT,	RO,	RU,	SD,
		SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VN,	YU,
		ZA,	ZW,	AM,	ΑZ,	BY,	KG,	ΚZ,	MD,	RU,	ТJ,	TM					
·	RW:	GH,	GM,	ΚE,	LS,	MW,	ΜZ,	SD,	SL,	SZ,	TZ,	UG,	ZW,	AT,	BE,	CH,	CY,
		DE,	DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	IT,	LU,	MC,	NL,	PT,	SE,	TR,	BF,
		ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GW,	ML,	MR,	NE,	SN,	TD,	ΤG		
AU	2001	0567	28		A5		2001	1126		AU 2	001-	5672	8	20010514			
US	2003	1764	54		A1		2003	0918	,	US 2	002-	2585	82		2	0021	101
PRIORIT	PRIORITY APPLN. INFO.:									AU 2	000-	7501		1	A 2	0000	515
-										AU 2	000-	1955		i	A 2	0001	207
									1	WO 2	001-	JP40	02 .	1	₩ 2	0010	514

OTHER SOURCE(S):

MARPAT 135:371759

GI

Title compds. AMQNHZ [I; wherein A = H, (un)substituted, unsatd., N-containing AΒ heterocyclic group, or C(NH)NHR; R = (un)substituted aryl or heterocyclic group; M = (CH2)n, (CH2)nO(CH2)m, or (CH2)nNH(CH2)m; n and m = independently 0-2; Q = (un) substituted cycloalkylene group, arylene, or

#### 10572342.

divalent heterocyclic group; Z = (un)substituted, unsatd., mono-, di-, tri-, or tetra-cyclic, N-containing heterocyclic group which may contain addnl. N, O, and S atoms as the ring member(s), e.g. indeno[1,2,3de]phthalazinyl or 5,6-dihydrobenzo[h]quinazolinyl; and the prodrugs or pharmaceutically acceptable salts thereof] were prepared For example, a mixture of 4-chloro-5,6-dihydrobenzo[h]quinazoline, 3-(1,2-dimethyl-1Himidazol-5-yl)aniline, and 1,3-dimethyl-2-imidazolidinone was heated for an hour at 200  $^{\circ}\text{C}$ , cooled, treated with 1N aqueous NaOH and water, and worked up to give II. I are 5-hydroxytryptamine (5-HT) antagonists useful for the prevention and/or treatment of central nervous system (CNS) disorders, such as anxiety, depression, obsessive compulsive disorders, migraine, anorexia, Alzheimer's disease, sleep disorders, bulimia, panic attacks, withdrawal from drug abuse, schizophrenia, and disorders associated with spinal trauma and/or head injury (no data).

IT 65810-96-0P, 1-Chloro-4-phenylisoquinoline

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of N-(imidazolylphenyl)dihydrobenzo[h]quinazolina mines and other N-containing heterocyclic amines as 5-hydroxytryptamine antagonists for treatment of CNS disorders)

RN 65810-96-0 HCAPLUS CN

Isoquinoline, 1-chloro-4-phenyl- (6CI, 9CI) (CA INDEX NAME)

L14 ANSWER 7 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:840672 HCAPLUS

134:100750 DOCUMENT NUMBER:

TITLE: Diphenyl guinolines and isoquinolines: synthesis and

primary biological evaluation

AUTHOR(S): Croisy-Delcey, Martine; Croisy, Alain; Carrez,

Daniele; Huel, Christiane; Chiaroni, Angele; Ducrot,

Pierre; Bisagni, Emile; Jin, Lu; Leclercq, Guy

CORPORATE SOURCE: UMR 176 CNRS Institut Curie-Recherche, Laboratoire

Raymond Latarjet, UMR 176 CNRS Institut

Curie-Recherche, Laboratoire Raymond Latarjet, Centre

Universitaire, Orsay, 91405, Fr.

SOURCE: Bioorganic & Medicinal Chemistry (2000), 8(11),

2629-2641

CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Science Ltd.

Journal DOCUMENT TYPE: English LANGUAGE:

OTHER SOURCE(S): CASREACT 134:100750

GT

AB The synthesis of a series of 35 substituted 3,4-di-phenylquinolines and -isoquinolines is described. The majority of these mols. differ from all other triphenylethylene based antiestrogens by a different spatial. location of the aminoalkyl side chain. The binding affinity of the most representative mols., including analogs without the side chain, for the estrogen receptor  $\alpha$  (ER) was determined. The ability of these mols. to induce the progesterone receptor was also studied. Antiproliferative activity was evaluated on MCF-7 human breast cancer cells, while intrinsic cytotoxic/cytostatic properties resulting from interaction with other targets than ER were assayed on L1210 murine leukemia cells. Introduction of an aminoalkylamino side chain at carbon 2 confers strong cytotoxic properties to diphenylquinolines as well as pure antiestrogenic activities. However, cytotoxicity is so high with respect to antiestrogenicity that the latter was clearly observable only in one case (I). The structure of I was determined by X-ray crystallog. Mol. modeling of its docking within the hormone-binding domain of the receptor was subsequently undertaken. According to these results, the design of mols. with the side chain bound to the ethylene part of the tri-phenylethylene skeleton might generate compds. of potential pharmacol. interest. ΙT 320371-39-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and cytotoxicity and antiestrogenic activity of diphenylquinolines and -isoquinolines)

RN 320371-39-9 HCAPLUS

CN Isoquinoline, 1-chloro-7-methoxy-3,4-bis(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCÈSSION NUMBER: 2

2000:712977 HCAPLUS

DOCUMENT NUMBER:

133:281699

TITLE: Preparation of isoquinoline derivatives as

phosphodiesterase V inhibitors

INVENTOR(S): Ukita, Shinzo; Yamada, Koichiro; Ohmori, Kenji;

Yoshikawa, Kohei

PATENT ASSIGNEE(S): Tanabe Seiyaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 49 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000281654	Α	20001010	JP 1999-83022	19990326
PRIORITY APPLN. INFO.:			JP 1999-83022	19990326
OBUED COUDCE/C).	MADDAM	122.201600		

OTHER SOURCE(S): MARPAT 133:281699 GΙ

AB The title compds. I [ring A = benzene ring with substituents; ring B = (un) substituted benzene ring; R1 = (un) substituted alkoxy, halo, etc.; R2 = CO2R3, etc.; R3 = H, etc.], useful as phosphodiesterase V inhibitors (no data) for the treatment of circulatory system diseases (no data), are prepared For example, the title compound II was prepared

299166-81-7P 299166-83-9P 299166-85-1P · IT 299166-87-3P 299166-89-5P 299169-96-3P 299170-06-2P

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

> (preparation of isoquinoline derivs. as phosphodiesterase V inhibitors)

RN 299166-81-7 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-7-(phenylmethoxy)-4-(3,4,5trimethoxyphenyl) -, methyl ester (9CI) (CA INDEX NAME)

RN 299166-83-9 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-7-(2-pyridinylmethoxy)-4-(3,4,5-trimethoxyphenyl)-, methyl ester (9CI) (CA INDEX NAME)

RN 299166-85-1 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-8-(phenylmethoxy)-4-(3,4,5-trimethoxyphenyl)-, methyl ester (9CI) (CA INDEX NAME)

RN 299166-87-3 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-iodo-7-(phenylmethoxy)-4-(3,4,5-trimethoxyphenyl)-, methyl ester (9CI) (CA INDEX NAME)

RN 299166-89-5 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-iodo-7-(2-pyridinylmethoxy)-4-(3,4,5-trimethoxyphenyl)-, methyl ester (9CI) (CA INDEX NAME)

RN 299169-96-3 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-7-(phenylmethoxy)-4-(3,4,5-trimethoxyphenyl)-, 1-methylethyl ester (9CI) (CA INDEX NAME)

$$i-Pro-C$$
 $N$ 
 $O-CH_2-Ph$ 

RN 299170-06-2 HCAPLUS

CN 3-Isoquinolinecarboxamide, 1-chloro-N-(2-hydroxyethyl)-N-methyl-7-(phenylmethoxy)-4-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{MeO} \\ \text{MeO} \\ \text{OMe} \\ \text{OMe} \\ \text{OMe} \\ \text{OMe} \\ \text{OMe} \\ \text{OOCH}_2 - \text{CH}_2 - \text{Ph} \\ \text{C1} \\ \end{array}$$

IT 299170-41-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of isoquinoline derivs. as phosphodiesterase V inhibitors)

RN 299170-41-5 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-7-(phenylmethoxy)-4-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)

L14 ANSWER 9 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:761240 HCAPLUS

DOCUMENT NUMBER: 123:339675

TITLE: Synthesis of 1-substituted 3,4-diarylisoquinoline

derivatives

AUTHOR(S): Delcey, Martine Croisy; Huel, Christiane; Bisagni,

Emile

CORPORATE SOURCE: Section de Biologie, Institut Curie, Orsay, 91405, Fr.

SOURCE: Heterocycles (1995), 41(8), 1721-30

CODEN: HTCYAM; ISSN: 0385-5414

PUBLISHER: Japan Institute of Heterocyclic Chemistry

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 123:339675

AB 3,4-Diaryl-1(2H)-isoquinolinones and their 1-chloro derivs. were easily prepared by (1) condensation of 2-aroylbenzyl chlorides with arylmethylamines; (2) treatment of the resulting 1-aryl-1-hydroxy-N-(arylmethyl)isoindol-3-ones with LDA leading to an opening reaction and subsequent ring closure; (3) dehydration in boiling formic acid, which generally provided the expected isoquinolones in good yields; and (4) chlorination of the 2H-isoquinolin-1-ones by phosphorous oxychloride. In

the cases of unsym. 4-hydroxy-3-(4-methoxyphenyl)-4-phenyl- and 4-hydroxy-4-(4-methoxyphenyl)-3-phenyl-1,2,3,4-tetrahydroisoquinolin-1-ones a partial migration and unexpected double aryl migrations  $(3\rightarrow4)$  and  $(4\rightarrow3)$  were observed

IT 102183-41-5P 170698-26-7P 170698-27-8P

170698-28-9P

RN 102183-41-5 HCAPLUS

CN Isoquinoline, 1-chloro-3, 4-diphenyl- (6CI, 9CI) (CA INDEX NAME)

RN 170698-26-7 HCAPLUS

CN Isoquinoline, 1-chloro-4-(4-methoxyphenyl)-3-phenyl- (9CI) (CA INDEX NAME)

RN 170698-27-8 HCAPLUS

CN Isoquinoline, 1-chloro-3-(4-methoxyphenyl)-4-phenyl- (9CI) (CA INDEX NAME)

RN 170698-28-9 HCAPLUS

CN Isoquinoline, 1-chloro-3,4-bis(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

L14 ANSWER 10 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:606104 HCAPLUS

DOCUMENT NUMBER: 123:83183

TITLE: Synthesis and antimicrobial evaluation of

4-phenyl-3-isoquinolinoyl-hydrazones

AUTHOR(S): Vittorio, Franco; Ronsisvalle, Giuseppe; Marrazzo,

Agostino; Blandino, Giovanna

CORPORATE SOURCE: Inst. Chim. Farmaceutica e Tossicologica, Univ.

Catania, Catania, 95125, Italy Farmaco (1995), 50(4), 265-72

CODEN: FRMCE8

PUBLISHER: Societa Chimica Italiana

DOCUMENT TYPE: Journal LANGUAGE: English

GΙ

SOURCE:

2-Methyl-1-oxo-1,2-dihydro-3-carbazoyl-4-phenylisoquinoline, 1-methoxy-and 1-chloro-3-carbazoyl-4-phenylisoquinoline as well as a series of their 2-hydrazono-derivs. I (R = Ph, 4-O2NC6H4, 2-furyl, 2-naphthyl, etc.), II (R1 = OMe, C1) were synthesized and evaluated for their antibacterial and antifungal activities, in vitro. I (R = 5-nitro-2-furyl) was fairly active against Staphylococcus aureus, Staphylococcus epidermidis, and streptococci group B.

IT 164935-21-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(synthesis, bactericidal, and fungicidal activity of phenylisoguinolinoyl hydrazones)

RN 164935-21-1 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, [(5-nitro-2-

furanyl)methylene]hydrazide (9CI) (CA INDEX NAME)

IT 89928-71-2 89929-13-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(synthesis, bactericidal, and fungicidal activity of

phenylisoquinolinoyl hydrazones)

RN 89928-71-2 HCAPLUS

CN 3-Isoquinolinecarbonyl chloride, 1-chloro-4-phenyl- (9CI) (CA INDEX NAME)

RN 89929-13-5 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl- (9CI) (CA INDEX NAME)

IT 164935-12-0P 164935-13-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis, bactericidal, and fungicidal activity of phenylisoquinolinoyl hydrazones)

RN 164935-12-0 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, hydrazide (9CI) (CA INDEX NAME)

RN 164935-13-1 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, sodium salt (9CI) (CA INDEX NAME)

#### Na

IT 164935-11-9P 164935-14-2P 164935-15-3P
 164935-16-4P 164935-17-5P 164935-18-6P
 164935-19-7P 164935-20-0P 164935-22-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (synthesis, bactericidal, and fungicidal activity of phenylisoquinolinoyl hydrazones)
RN 164935-11-9 HCAPLUS
CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, 2-[(1-chloro-4-phenyl-3-isoquinolinyl)carbonyl]hydrazide (9CI) (CA INDEX NAME)

RN 164935-14-2 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, (phenylmethylene)hydrazide (9CI) (CA INDEX NAME)

RN 164935-15-3 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, [(4-nitrophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)

RN 164935-16-4 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, [(3-nitrophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)

RN 164935-17-5 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, [(2-nitrophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)

RN 164935-18-6 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, [(4-chlorophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)

RN 164935-19-7 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, [(4-methoxyphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)

RN 164935-20-0 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, (2-furanylmethylene)hydrazide (9CI) (CA INDEX NAME)

RN 164935-22-2 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, (2-naphthalenylmethylene)hydrazide (9CI) (CA INDEX NAME)

L14 ANSWER 11 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 1995:393124 HCAPLUS

DOCUMENT NUMBER:

123:143784

TITLE:

Transformations of polyfunctional 3-amino-1(2H)-

isoquinolinones

AUTHOR(S):

Volovenko, Yu. M.; Volovnenko, T. A.; Babichev, F. S. Kiev. Univ., Kiev, Ukraine

CORPORATE SOURCE: SOURCE:

Khimiya Geterotsiklicheskikh Soedinenii (1994), (4),

515-20

CODEN: KGSSAQ; ISSN: 0132-6244

PUBLISHER:

Latviiskii Institut Organicheskogo Sinteza

DOCUMENT TYPE:

Journal

LANGUAGE:

Russian

GI

## \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Title compds. I (R = CH2Ph, Me, CHMe2; R1 = CN) reacted with BzCl to give oxazinoisoquinolinones (II). I (R = CH2Ph, hexyl, Ph; R1 = CN) reacted with formamide to give pyrimidoisoquinolinones (III). Treatment of I (R = H, R1 = Ph) with POCl3/PCl5 gave chloroisoquinolinamine IV (R2 = C1), which underwent substitution reactions to give IV (R2 = alkoxy, NHNH2, alkylamino, etc.). I (R = NH2, R1 = 1-methylbenzimidazol-2-yl) reacted with OC(COOEt)2 to give triazinoisoquinolinone V.

TT 166536-37-4P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and substitution reactions of)

166536-37-4 HCAPLUS RN

CN 3-Isoquinolinamine, 1-chloro-7-nitro-4-phenyl- (9CI) (CA INDEX NAME)

HCAPLUS COPYRIGHT 2007 ACS on STN L14 ANSWER 12 OF 31

ACCESSION NUMBER:

1995:257714 HCAPLUS

DOCUMENT NUMBER:

122:56051

TITLE:

Condensed heterocyclic compounds, their production and

INVENTOR(S):

Natsugari, Hideaki; Ikeda, Hitoshi; Ishimaru,

Takenori; Doi, Takayuki

PATENT ASSIGNEE(S):

Takeda Chemical Industries, Ltd., Japan

SOURCE:

Eur. Pat. Appl., 161 pp.

DOCUMENT TYPE:

CODEN: EPXXDW

LANGUAGE:

Patent English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

GΙ

PATENT NO.	KIND DATE	APPLICATION NO.	DATE
•	A2 1994030 A3 1994050 B1 1997120	25	19930902
	DE, DK, ES, FI A 1994030 B 1996093	R, GB, GR, IE, IT, LI, LU 07 NO 1993-3133 30	
US 5482967 AT 161530 CA 2105518 CA 2105518	C 1997010 A 1996010 T 1998010 C 1994030 A1 1994030	09 US 1993-114841 15 AT 1993-114024 05 CA 1993-2105518	19930902
AU 9346132 AU 667739	A 1994033 B2 1996040	10 AU 1993-46132	19930903
FI 9303857 JP 07010844 JP 3724818	A 199405: A 199501: B2 200512	13 JP 1993-220333	
HU 67284 CN 1090274 US 5700810		28 HU 1993-2499 03 CN 1993-118986	19930904
PRIORITY APPLN. INFO.:	11 193712.	JP 1992-237481 JP 1993-103328 US 1993-114841	A 19920904
OTHER SOURCE(S):	CASREACT 122:	56051; MARPAT 122:56051	19900902

AΒ Novel compds. represented by I were prepared; ring A may be substituted; ring B represents an optionally substituted benzene ring; either X or Y represents -NR1- (R1 represents a hydrogen atom, an optionally substituted hydrocarbon group, an optionally substituted hydroxyl group or an optionally substituted amino group), -O- or -S-, the other representing -CO-, -CS-, or -C(R2)R2a- (R2 and R2a independently represent a hydrogen atom or an optionally substituted hydrocarbon group), or either  ${\tt X}$  or  ${\tt Y}$ represents -N=, the other representing =CR3- (R3 represents a hydrogen atom, a halogen atom, an optionally substituted hydrocarbon group, an optionally substituted amino group, a substituted hydroxyl group or a mercapto group substituted by an optionally substituted hydrocarbon group); ---- represents a single or double bond; when ---- is a single bond, Z represents -CR4- (R4 represents a hydrogen atom, hydroxyl group or an optionally substituted hydrocarbon group) or a nitrogen atom, or (ii) when --- is a double bond, Z represents a carbon atom. D represents a C1-3 alkylene group which may be substituted by an oxo group or a thioxo

Ι

group, or D and Y, taken together, may form a 5- to 7-membered ring which may be substituted by an oxo group or a thioxo group; E represents -NR5-(R5 represents a hydrogen atom or an optionally substituted hydrocarbon group), -0- or -S-(0)n- (n is 0, 1 or 2), or R5 and Y, taken together, may form a 5- to 7-membered ring which may be substituted by an oxo group or a thioxo group. G represents a bond or a C1-3 alkylene group. Ar represents an optionally substituted aryl or heterocyclic group. representative prepared compds. were benzopyran-, quinoline-, isoquinolineand quinoxalinecarboxamides. I and its salts have an excellent activity of inhibiting ACAT, lowering cholesterol in blood and inhibiting tachykinin receptor (test data given). 159818-74-3P 159818-76-5P

ΙT

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation and biol. activity of)

RN159818-74-3 HCAPLUS

CN-3-Isoquinolinecarboxamide, N-[[3,5-bis(trifluoromethy1)pheny1]methy1]-1chloro-4-(4-fluorophenyl)-N-methyl- (9CI) (CA INDEX NAME)

RN 159818-76-5 HCAPLUS

CN 3-Isoquinolinecarboxamide, N-[[3,5-bis(trifluoromethyl)phenyl]methyl]-1chloro-N-methyl-4-phenyl- (9CI) (CA INDEX NAME)

L14 ANSWER 13 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1993:649888 HCAPLUS

DOCUMENT NUMBER:

CORPORATE SOURCE:

119:249888

TITLE:

Synthesis of some triazolo- and tetrazoloisoquinolines

AUTHOR(S): Bhide, B. H.; Akolkar, V. D.; Brahmbhatt, D. I.

Dep. Chem., Sardar Patel Univ., Vallabh Vidyanagar,

SOURCE:

388 120, India Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1993),

32B(6), 675-8 CODEN: IJSBDB; ISSN: 0376-4699

DOCUMENT TYPE: LANGUAGE:

Journal English

OTHER SOURCE(S):

CASREACT 119:249888

GΙ

Treatment of isocoumarins I (X = O, R1 = H, Me, R2 = H, Ph, R3 = H, OH, AB OMe) with ammonia-ethanol gives isoquinolones I (X = NH), which react with POC13-PC15 affording 1-chloroisoquinolines II (R4 = C1). Further reaction of II (R4 = C1) with N2H4 furnishes 1-hydrazinoisoquinolines II (R4 = NHNH2), which on treatment with HCO2H and NaNO2/HCl provide triazoloisoquinolines III (X1 = CH) and tetrazoloisoquinolines III (X1 =

IT151070-21-2P 151070-22-3P

> RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and substitution of, with hydrazine)

RN 151070-21-2 HCAPLUS

CN Isoquinoline, 1-chloro-5,7-dimethoxy-4-phenyl- (9CI) (CA INDEX NAME)

RN 151070-22-3 HCAPLUS

CN 5,7-Isoquinolinediol, 1-chloro-4-phenyl- (9CI) (CA INDEX NAME)

HCAPLUS COPYRIGHT 2007 ACS on STN L14 ANSWER 14 OF 31

1992:651216 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 117:251216

Synthesis of isoquinolines by cycloaddition of arynes TITLE:

to 1,2,4-triazines

AUTHOR(S): Gonsalves, Antonio M. D. Rocha; Pinho e Melo, Teresa

M. V. D.; Gilchrist, Thomas L.

Fac. Cienc. Tecnol., Univ. Coimbra, Port. Tetrahedron (1992), 48(33), 6821-6 CORPORATE SOURCE:

SOURCE:

CODEN: TETRAB; ISSN: 0040-4020

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 117:251216

GΙ

AB Benzyne was generated from benzenediazonium-2-carboxylate in the presence of several 1,2,4-triazines I (R1 = C1, Me, CO2Et; R2 = Ph, Me, H, CO2Et; R3 = Ph, Me, CO2Et) to give isoquinolines II in moderate yield. 1-Aminobenzotriazole was also used as a source of benzyne to again give isoquinolines in moderate yield. 4-Methylbenzyne, which was generated from 5-methylanthranilic acid, reacted unselectively with the triazines to give mixts. of 6- and 7-methylisoquinolines III and IV (R1 = Ph, R2 = H; R1 = R2 = Ph, CO2Et). On the other hand reactions of 3-methylbenzyne with the triazines I (R1 = CO2Et, R2 = H, Ph, R3 = Ph) proceeded with high regioselectivity, giving only the 5-methylisoquinoline V and the 8-methylisoquinoline VI, resp.

TΤ 102183-41-5P, 1-Chloro-3, 4-diphenylisoquinoline RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of) RN 102183-41-5 HCAPLUS

Isoquinoline, 1-chloro-3,4-diphenyl- (6CI, 9CI) (CA INDEX NAME) CN

L14 ANSWER 15 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1:

1990:611797 HCAPLUS

DOCUMENT NUMBER:

113:211797

TITLE:

Application of (2-cyanoaryl)arylacetonitriles in cyclization and annulation reactions. Preparation of

3-arylindans, 4-aryl-3,4-dihydronaphthalenes, 4-arylisoquinolines, 1-aminonaphthalenes, and

heterocyclic analogues

AUTHOR(S):

Sommer, Michael Bech; Begtrup, Mikael; Boegesoe, Klaus

Peter

CORPORATE SOURCE:

H. Lundbeck A/S, Copenhagen, DK-2500, Den.

SOURCE:

Journal of Organic Chemistry (1990), 55(16), 4822-7

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE:

Journal

Ι

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 113:211797

GΙ

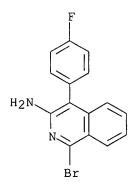
(2-Cyanoaryl)arylacetonitriles, obtained from o-halogen-substituted AB cyanoaroms. and arylacetonitriles, may be alkylated with Me chloroacetate. Subsequent abstraction of the proton adjacent to the ester group followed by attack of the anion at the aromatic cyano group gives rise to annulated 1-aminocyclopentenes, e.g., I (R = Ph, substituted Ph, R1 = cyano, R2 = CO2Me, n = o) by a Dieckmann-type reaction. The homologous esters similarly produce annulated 1-aminocyclohexenes I (n = 1). The generality of this annulation method is demonstrated by preparation of derivs. of 1-amino-1H-indene, 4-amino-6H-cyclopenta[b]thiophene, 5-amino-7H-pyridine, 1-amino-3,4-dihydronaphthalene, and 5-amino-2,9-dihydro-1Hcyclopent[c]isoquinoline. Hydrolysis and decarboxylation of these compds. leads to ketones as exemplified by synthesis of 3-arylindan-1-ones and 4-aryl-3,4-dihydro-1(2H)-naphthalen-1-ones. When treated with HBr, the (2-cyanophenyl)phenylacetonitriles cyclize to [3,4]-condensed 3-bromo-5-aryl-6-aminopyridines. Thus, derivs. of isoquinoline, thieno[3,2-c]pyridine, and 1,6-naphthyridine were prepared IT 127999-80-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and debromination of)

RN 127999-80-8 HCAPLUS

CN 3-Isoquinolinamine, 1-bromo-4-(4-fluorophenyl)- (9CI) (CA INDEX NAME)



L14 ANSWER 16 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1984:185341 HCAPLUS

DOCUMENT NUMBER: 100:185341

TITLE: Studies on alkyl and aryl derivatives of isoquinoline.

Part II. Synthesis and pharmacological activity of dialkylaminoalkyl esters of 1-chloro-3-carboxy-4-methylisoquinoline and corresponding 4-phenyl

derivatives

AUTHOR(S): Vittorio, F.; Santagati, N. A.; Lancetta, T.; Duro,

F.; Reina, R. Arrigo; Cosentino, C.

CORPORATE SOURCE: Ist. Chim. Farm. Tossicol., Univ. Catania, Catania,

Italy

SOURCE: Farmaco, Edizione Scientifica (1984), 39(3), 217-28

CODEN: FRPSAX; ISSN: 0430-0920

DOCUMENT TYPE: Journal

LANGUAGE: Italian

OTHER SOURCE(S): CASREACT 100:185341

AB Six dialkylaminoalkyl 1-chloro-3-carboxy-4-methylisoquinolines (I; R = dialkylaminoalkyl) and 3 dialkylaminoethyl 1-chloro-3-carboxy-4-phenylisoquinolines (II; R = dialkylaminoethyl) were prepared from 3-carboxy-4-methylisocoumarinic acid [56661-74-6] and 1-chloro-3-carboxymethyl-4-phenylisoquinoline [56661-82-6], resp., and 6 of the 9 esters were screened pharmacol. I and II had antispasmodic activity; I were the less toxic. The compds. had no anticonvulsant or

hypnotic activities. II, but not I, had slight analgesic and anti-inflammatory activities.

IT 89928-75-6 89928-76-7 89928-77-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(pharmacol. of)

RN 89928-75-6 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, 2-(4-morpholinyl)ethyl ester (9CI) (CA INDEX NAME)

RN 89928-76-7 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, 2-(dimethylamino)ethyl ester (9CI) (CA INDEX NAME)

RN 89928-77-8 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, 2-(diethylamino)ethyl ester (9CI) (CA INDEX NAME)

IT 89929-13-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and acid chlorination of)

RN 89929-13-5 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl- (9CI) (CA INDEX NAME)

IT 89928-71-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and esterification of)

RN 89928-71-2 HCAPLUS

CN 3-Isoquinolinecarbonyl chloride, 1-chloro-4-phenyl- (9CI) (CA INDEX NAME)

IT 89928-72-3P 89928-73-4P 89928-74-5P

89929-13-5DP, dialkylaminoalkyl esters

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(preparation and pharmacol. of)

RN 89928-72-3 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, 2-(4-morpholinyl)ethyl ester, monohydrochloride (9CI) (CA INDEX NAME)

## ● HCl

RN 89928-73-4 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, 2-(dimethylamino)ethyl ester, monohydrochloride (9CI) (CA INDEX NAME)

## ● HCl

RN 89928-74-5 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, 2-(diethylamino)ethyl ester, monohydrochloride (9CI) (CA INDEX NAME)

## ● HCl

RN 89929-13-5 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl- (9CI) (CA INDEX NAME)

IT 78945-98-9

RL: RCT (Reactant); RACT (Reactant or reagent)
 (saponification of)

RN 78945-98-9 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, methyl ester (9CI) (CA INDEX NAME)

L14 ANSWER 17 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1981:515239 HCAPLUS

DOCUMENT NUMBER: 95:115239

TITLE: Synthesis and pharmacological activity of amino- and

dialkylaminoalkylamide derivatives of 3-carboxy-4-phenylisoquinoline. Part I

AUTHOR(S): Duro, F.; Santagati, N. A.; Vittorio, F.

CORPORATE SOURCE: Ist. Chim. Farm. Tossicol., Univ. Catania, Catania,

Italy

SOURCE: Farmaco, Edizione Scientifica (1981), 36(6), 400-11

CODEN: FRPSAX; ISSN: 0430-0920

DOCUMENT TYPE: Journal LANGUAGE: Italian

OTHER SOURCE(S): CASREACT 95:115239

GΙ

IT

AB 3-Isoquinolinecarboxamides I and II [R = H, R1 =  $\omega$ - (dialkylaminoalkyl; NRR1 = morpholino, piperidino, pyrrolidino, 4-methyl-1-piperazinyl] were prepared and they exhibited spasmolytic, anesthetic, and antiinflammatory activity. 2-Methyl-4-phenyl-1,2-dihydro-2-oxo-3-isoquinolinecarbonyl chloride was treated with H2NCH2CH2NMe2 in C6H6 to give I (R = H, R1 = CH2CH2NMe2).

78945-98-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and substitution reaction of, with sodium methoxide, saponification in)

RN 78945-98-9 HCAPLUS

CN 3-Isoquinolinecarboxylic acid, 1-chloro-4-phenyl-, methyl ester (9CI) (CA INDEX NAME)

L14 ANSWER 18 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1978:120952 HCAPLUS

DOCUMENT NUMBER:

88:120952

TITLE:

The reaction of heteroaromatic N-oxides with acid chloride and cyanide. V. On the reaction of 1-substituted and 1,4-disubstituted isoquinoline 2-oxides with aroyl chloride and potassium cyanide

AUTHOR(S):

Hayashi, Eisaku; Miyashita, Akira

CORPORATE SOURCE: SOURCE:

Shizuoka Coll. Pharm., Shizuoka, Japan Yakugaku Zasshi (1977), 97(12), 1334-44

CODEN: YKKZAJ; ISSN: 0031-6903

DOCUMENT TYPE:

Journal

LANGUAGE:

Japanese

OTHER SOURCE(S):

CASREACT 88:120952

GT

AB Nine isoquinolines or their N-oxides I (R = Ph, CN, CH2Ph, Me, Et, Bu; R1 = H) and the diisoquinolinyl dioxide II were treated with R2COC1 (R2 = Ph, 2-furyl, p-MeOC6H4, 3-pyridyl, p-No2C6H4) and KCN to give I (R1 = O2CR2) and the dihydro derivs. III (R3 = H), whereas the N-oxides of disubstituted isoquinolines (I, R = Ph, Et, CN; R1 = Ph) gave only III (R3 = Ph).

IT 65810-96-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reduction of)

RN 65810-96-0 HCAPLUS

CN Isoquinoline, 1-chloro-4-phenyl- (6CI, 9CI) (CA INDEX NAME)

L14 ANSWER 19 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1978:89492 HCAPLUS

DOCUMENT NUMBER: 88:89492

Isoquinolines. 7. Reaction of ethylene oxide with TITLE:

isoquinolines. Novel isoquinolone and oxazolidine

formation

AUTHOR(S): Filer, Crist N.; Granchelli, Felix E.; Soloway, Albert

H.; Neumeyer, John L.

CORPORATE SOURCE: Coll. Pharm. Allied Health Prof., Northeast. Univ.,

Boston, MA, USA

SOURCE: Journal of Organic Chemistry (1978), 43(4), 672-5

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 88:89492

GT

Aprotic deamination of 3-amino-1-bromo-4-(4-nitrophenyl) isoquinoline AB followed by partial reduction yielded 4-(4-aminophenyl)-1-bromoisoquinoline (I), and complete reduction yielded 4-(4-aminophenyl)isoquinoline (II). Isoquinolines I and II, when treated with excess ethylene oxide in AcOH gave the isoquinolones III (R = H, Ac). The mechanism involved an oxazolidine intermediate. When isoquinoline was similarly treated with ethylene oxide, 2,3-dihydro-10bH-oxazolo[2,3-a]isoquinoline (IV) was obtained.

31309-65-6 ΙT

RL: RCT (Reactant); RACT (Reactant or reagent)

(deamination of)

31309-65-6 HCAPLUS RN

CN 3-Isoquinolinamine, 1-bromo-4-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

IT 64345-80-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction with ethylene oxide)

RN 64345-80-8 HCAPLUS

CN Benzenamine, 4-(1-bromo-4-isoquinolinyl)- (9CI) (CA INDEX NAME)

IT 64345-81-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reduction of)

RN 64345-81-9 HCAPLUS

CN Isoquinoline, 1-bromo-4-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

IT 64345-76-2P 64345-78-4P

Updated Search

RN 64345-76-2 HCAPLUS

CN Ethanol, 2-[[4-(1-bromo-4-isoquinolinyl)phenyl]amino]- (9CI) (CA INDEX NAME)

RN 64345-78-4 HCAPLUS

CN Ethanol, 2,2'-[[4-(1-bromo-4-isoquinolinyl)phenyl]imino]bis- (9CI) (CA INDEX NAME)

L14 ANSWER 20 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1977:561588 HCAPLUS

DOCUMENT NUMBER: 87:161588

TITLE: Isoquinolines. 6. Potential central nervous system

antitumor agents. Nitrogen mustards of

3-amino-4-(p-aminophenyl)isoquinoline

AUTHOR(S): Filer, Crist N.; Granchelli, Felix E.; Soloway, Albert

H.; Neumeyer, John L.

CORPORATE SOURCE: Coll. Pharm. Allied Health Prof., Northeast. Univ.,

Boston, MA, USA

SOURCE: Journal of Medicinal Chemistry (1977), 20(11), 1504-8

CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 87:161588

GI

AB Six title compds. (I:R1 = H, CH2CH2Cl; R2 = CH2CH2Cl, COCH2N(CH2CH2Cl)2, COCH2CH2N(CH2CH2Cl)2, CH2CH2N(CH2CH2Cl)2; R3 = Ac, H, Et; R4 = H, Br) were prepared from the appropriate diol precursors using SOCl2. Most of the intermediates and all title compds. were tested in the i.p. murine leukemia L1210 system, but none were active.

IT 64157-36-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and chlorination of)

RN 64157-36-4 HCAPLUS

Ι

CN Acetamide, N-[4-[4-[bis(2-hydroxyethyl)amino]phenyl]-1-bromo-3-isoquinolinyl]- (9CI) (CA INDEX NAME)

IT 64157-44-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as neoplasm inhibitor)

RN 64157-44-4 HCAPLUS

CN Acetamide, N-[4-[4-[bis(2-chloroethyl)amino]phenyl]-1-bromo-3-isoquinolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)

## ● HCl

IT 64157-54-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with ethylene oxide)

RN 64157-54-6 HCAPLUS

CN Acetamide, N-[4-(4-aminophenyl)-1-bromo-3-isoquinolinyl]- (9CI) (CA INDEX NAME)

L14 ANSWER 21 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1977:89634 HCAPLUS

DOCUMENT NUMBER: 86:89634

TITLE: 3-Substituted 4-aryl isoquinolines

INVENTOR(S): Houlihan, William J.; Nadelson, Jeffrey

PATENT ASSIGNEE(S): Sandoz-Wander, Inc., USA

SOURCE: U.S., 8 pp. Division of U.S. 3,872,125.

CODEN: USXXAM

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3989704	Α	19761102	US 1975-542843	19750121

US 3872125	Α	19750318	US 1973-	411074	19731030
US 4175191	А	19791120	US 1977-	852503	19771117
PRIORITY APPLN. IN	FO.:		US 1972-	259860 A2	19720605
			US 1973-	339616 A2	19730303
			US 1973-	411074 A3	19731030
			US 1975-	542843 A3	19750121
			US 1976-	705703 A1	19760715

GI

AΒ Hydrogenation of 3-tert-butyl-4-phenylisoquinoline (I) in AcOH over PtO2 at  $20^{\circ}/50$  psi gives II, effective as antidiabetic. I is obtained by reaction of PhCONHMe with PhCHO to give 2-[PhCH(OH)]C6H4CONHMe which is cyclized to 3-phenylphthalide (III). Hydrogenation of III gives 2-(PhCH2)C6H4CO2H which is converted with Me3CNH2 to 2-(PhCH2)C6H4CONHCMe3 (IV). Reaction of IV with Me3CCOCl gives 2-[PhCH(COCMe3)]C6H4CONHCMe3 which on treatment with polyphosphoric acid gives 3-tert-buty1-4phenylisocarbostyril which is converted to I via 3-tert-butyl-1-chloro-4phenylisoquinoline.

IT 55792-01-3P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and dechlorination of)

RN 55792-01-3 HCAPLUS

CN Isoquinoline, 1-chloro-3-(1,1-dimethylethyl)-4-phenyl- (9CI) NAME)

HCAPLUS COPYRIGHT 2007 ACS on STN L14 ANSWER 22 OF 31

ACCESSION NUMBER:

1975:428123 HCAPLUS

DOCUMENT NUMBER:

83:28123

TITLE: INVENTOR(S):

3-Substituted-4-aryl isoquinolines Houlihan, William J.; Nadelson, Jeffrey

Sandoz-Wander, Inc., USA

PATENT ASSIGNEE(S): SOURCE:

U.S., 8 pp.

DOCUMENT TYPE:

CODEN: USXXAM

LANGUAGE:

Patent English

FAMILY ACC. NUM. COUNT:

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3872125 US 3989704 US 4175191 PRIORITY APPLN. INFO.:	A A A	19750318 19761102 19791120	US 1973-411074 US 1975-542843 US 1977-852503 US 1972-259860 US 1973-339616 US 1973-411074 US 1975-542843	19731030 19750121 19771117 A2 19720605 A2 19730303 A3 19731030 A3 19750121
			US 1976-705703	A1 19760715

OTHER SOURCE(S): MARPAT 83:28123

GI For diagram(s), see printed CA Issue.

AB Tetrahydroisoquinoline I, useful as an antidiabetic when administered orally at 100 mg twice a day, was prepared from lithiated PhCONHMe and BzH via o-PhCH(OH)C6H4CONHMe, 3-phenylphthalide, o-PhCH2C6H4CO2H, o-PhCH2C6H4CONHCMe3, o-PhCH(COCMe3)C6H4CONHCMe3, isocarbostyril II(R = OH), chloroisoquinoline II(R = Cl), and isoquinoline II(R = H)·HCl.

IT 55792-01-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and dechlorination of)

RN 55792-01-3 HCAPLUS

CN Isoquinoline, 1-chloro-3-(1,1-dimethylethyl)-4-phenyl- (9CI) (CA INDEX NAME)

L14 ANSWER 23 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1975:409819 HCAPLUS

DOCUMENT NUMBER: 83:9819

TITLE: 2-Methyl-3-substituted-4-aryl isoquinolines

INVENTOR(S): Houlihan, William J.; Nadelson, Jeffrey

PATENT ASSIGNEE(S): Sandoz-Wander, Inc., USA

SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3870722	A	19750311	US 1973-412132	19731102
PRIORITY APPLN. INFO.:			US 1973-412132 F	19731102

GI For diagram(s), see printed CA Issue.

AB Four hypocholesterlemic (no data) isoquinolines I (R1 = tert-Bu, R2 = H, Me, MeO; R1 = 1-methylcyclohexyl, R2 = H) were prepared by HCO2H-HCHO

methylation of II. II(R1 = tert-Bu, R2 = H) was prepared from BzNHMe and BzH via o-HOCHPhC6H4CONHMe, phthalide III, o-PhCH2C6H4CO2H, o-PhCH2C6H4COC1, o-PhCH2C6H4CONHCMe3, o-PhCH(COCMe3)C6H4CONHCMe3, isocarbostyryl IV, chloroisoquinoline V, and isoquinoline VI.

ΙT 55792-01-3P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and hydrogenolysis of)

RN 55792-01-3 HCAPLUS

CN Isoquinoline, 1-chloro-3-(1,1-dimethylethyl)-4-phenyl- (9CI) (CA INDEX

L14 ANSWER 24 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1975:16836 HCAPLUS

DOCUMENT NUMBER: 82:16836

TITLE: Hypolipemic and hypoglycemic 1-(1-

imidazolyl) isoquinolines

INVENTOR(S): Lerch, Ulrich; Granzer, Ernold

Farbwerke Hoechst A.-G. PATENT ASSIGNEE(S): SOURCE:

Ger. Offen., 34 pp.

CODEN: GWXXBX Patent

DOCUMENT TYPE: LANGUAGE: German

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
	DE 2314985	A1	19741017	DE 1973-2314985		19730326
	ES 424436	A1	19761101	ES 1974-424436		19740320
	GB 1464289	A	19770209	GB 1974-12861		19740322
	ZA 7401917	A	19750326	ZA 1974-1917		19740325
	DD 114607	A5	19750812	DD 1974-177438		19740325
	AU 7467098	A	19750925	AU 1974-67098		19740325
	US 3914236	A	19751021	US 1974-454713		19740325
	HU 168524	В	19760528	HU 1974-HO1659		19740325
	AT 7402452	A	19761015	AT 1974-2452		19740325
	AT 337183	В	19770610			
	BE 812841	A1	19740926	BE 1974-142458		19740326
	FR 2223024	A1	19741025	FR 1974-10396		19740326
	JP 49126684	A	19741204	JP 1974-33183		19740326
	US 3961062	Α	19760601	US 1975-562048		19750326
PRI	ORITY APPLN. INFO.:			DE 1973-2314985	Α	19730326
				DE 1973-7314985	A	19730326
				US 1974-454713	A3	19740325
CT	For diamon/al aca		ad CA Tagus			

GΙ For diagram(s), see printed CA Issue.

AB Nineteen imidazolyl-isoquinolines I (R = H, Cl, Ph, or Et; R1 = H, Ph,

cyclohexyl, Et, Bu, or Cl; R2, R3, R4 = H, Ph, or Me) and (or) their salts, e.g. hydrochlorides, were prepared by reaction of the corresponding 1-chloroisoquinolines with the imidazoles in the presence of NaH or KOH or Bu3N in, e.g., (MeOCH2)2 or DMF. I had hypolipemic and hypoglycemic activities in rats and rabbits.

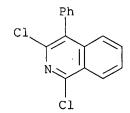
IT 55150-48-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction with imidazoles)

RN 55150-48-6 HCAPLUS

CN Isoquinoline, 1,3-dichloro-4-phenyl- (9CI) (CA INDEX NAME)



AUTHOR(S):

L14 ANSWER 25 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1973:532897 HCAPLUS

DOCUMENT NUMBER: 79:132897

TITLE: Isoquinolines. 3. 3-Aminoisoquinoline derivatives

with central nervous system depressant activity Neumeyer, John L.; Weinhardt, Klaus K.; Carrano,

Richard A.; McCurdy, David H.

CORPORATE SOURCE: Arthur D. Little, Inc., Cambridge, MA, USA

SOURCE: Journal of Medicinal Chemistry (1973), 16(7), 808-13

CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: Journal LANGUAGE: English

AB 3-Amino-4-(p-aminophenyl)isoquinoline (I) [31309-67-8] and 4-(p-acetamidophenyl)-3-aminoisoquinoline (II) [31309-69-0] showed central

nervous depressant and anticonvulsant activity in mice. I and II depressed forced motor activity with ED50 values of 37.8 and 63.3 mg/kg i.p., resp., and were thus similar to phenobarbital and diphenylhydantoin in potency. Both compds. protected against electroshock convulsions and oxotremorine-induced tremor. To synthesize I,  $\alpha$ -cyano-o-tolunitrile [3759-28-2] was reacted with p-nitrobromobenzene [586-78-7] under basic conditions to form  $\alpha$ -cyano- $\alpha$ -(p-nitrophenyl)-o-tolunitrile

[31309-64-5], which was cyclized with HBr to 3-amino-1-bromo-4-(p-nitrophenyl)isoquinoline [31309-65-6] and hydrogenated over Pd/C

to I. I was acetylated with Ac20 in pyridine to II.

IT 31309-65-6P 31309-66-7P 49710-63-6P

49710-64-7P 49710-68-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 31309-65-6 HCAPLUS

CN 3-Isoquinolinamine, 1-bromo-4-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

RN 31309-66-7 HCAPLUS

CN 3-Isoquinolinamine, 4-(4-aminophenyl)-1-bromo- (9CI) (CA INDEX NAME)

RN 49710-63-6 HCAPLUS

CN Acetamide, N-[1-bromo-4-(4-nitrophenyl)-3-isoquinolinyl]- (9CI) (CA INDEX NAME)

RN 49710-64-7 HCAPLUS

CN Acetamide, N-acetyl-N-[1-bromo-4-(4-nitrophenyl)-3-isoquinolinyl]- (9CI) (CA INDEX NAME)

RN 49710-68-1 HCAPLUS

CN 3-Isoquinolinamine, 1-bromo-4-(2-nitrophenyl)- (9CI) (CA INDEX NAME)

L14 ANSWER 26 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1971:99899 HCAPLUS

DOCUMENT NUMBER:

74:99899

TITLE:

Central nervous system depressant 3-amino-4-(p-

aminophenyl) isoquinoline derivatives Neumeyer, John L.; Weinhardt, Klaus K.

INVENTOR(S):

Little, Arthur D., Inc.

PATENT ASSIGNEE(S): SOURCE:

Ger. Offen., 23 pp.

SOURCE:

CODEN: GWXXBX

DOCUMENT TYPE:

Patent

LANGUAGE:

German

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE	
22.70		A	19710211	DE 1970-2030675	_	19700622	
	RITY APPLN. INFO.:			US 1969-835734	Α	19690623	
GI	For diagram(s), see	-					
AB				ceutically compatibl			
prepared by cyclization of p-O2NC6H4CH(CN)C6H4CN-o, obtained from p-BrC6H4NO2 and o-NCC6H4CH2CN, with HBr-KHCO3, and one- or						from	
	two-step NO2 reduct	ion and	l debrominati	on. Acetylation of B2H6 reduction I (R	the		
ΙT	31309-65-6P 31309-6		, ,	•		•	
	RL: SPN (Synthetic (propagation of)	prepara	tion); PREP	(Preparation)			

(preparation of) RN 31309-65-6 HCAPLUS

CN 3-Isoquinolinamine, 1-bromo-4-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

RN 31309-66-7 HCAPLUS

CN 3-Isoquinolinamine, 4-(4-aminophenyl)-1-bromo- (9CI) (CA INDEX NAME)

L14 ANSWER 27 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1960:78652 HCAPLUS

DOCUMENT NUMBER: 54:78652
ORIGINAL REFERENCE NO.: 54:14934f-h

TITLE: Ultraviolet spectra of some derivatives of 3- and

4-phenylisoquinoline

AUTHOR(S): Berti, Giancarlo; Corti, Piero

CORPORATE SOURCE: Univ. Pisa, Italy

SOURCE: Annali di Chimica (Rome, Italy) (1959), 49, 2110-23

CODEN: ANCRAI; ISSN: 0003-4592

DOCUMENT TYPE: Journal LANGUAGE: Unavailable

AB The ultraviolet spectra in EtOH solution of the following substituted isoquinolines have been determined: 4-phenyl-, 3-methyl-4-phenyl-, 3-ethyl-4-phenyl-, 3-phenyl-, 3,4-diphenylisoquinoline, and their hydrochlorides; 1-chloro-4-phenyl-, 1-chloro-3-methyl-4-phenyl-, 1-chloro-3,4-diphenylisoquinoline; 4-phenyl-, 1-chloro-3,4-diphenylisoquinoline; 4-phenyl-, 2-methyl-4-phenyl-, 3-methyl-4-phenyl-, 3-ethyl-4-phenyl-, 3-phenyl-, 3,4-diphenylisocarbostyril. A phenyl group in the 4 position does not change much the characteristic isoquinoline spectrum, with 3 bands around 220, 280, and 320 mμ, while 3-phenylisoquinolines have quite different spectra, with bands around 250, 290, and 330 mμ; this shows much less fine structure. The

isoquinolinium salts are characterized by a strong band around 345 m $\mu.$  Absorption curves and tables of  $\lambda maximum$  and log  $\epsilon$  for all the above compds. are included.

IT 65810-96-0, Isoquinoline, 1-chloro-4-phenyl-(spectra of)

RN 65810-96-0 HCAPLUS

CN Isoquinoline, 1-chloro-4-phenyl- (6CI, 9CI) (CA INDEX NAME)

IT 101423-02-3, Isoquinoline, 1-chloro-3-methyl-4-phenyl-101602-30-6, Isoquinoline, 1-chloro-3-ethyl-4-phenyl-102183-41-5, Isoquinoline, 1-chloro-3,4-diphenyl-(spectrum of)

RN 101423-02-3 HCAPLUS

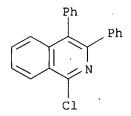
CN Isoquinoline, 1-chloro-3-methyl-4-phenyl- (6CI) (CA INDEX NAME)

RN 101602-30-6 HCAPLUS

CN Isoquinoline, 1-chloro-3-ethyl-4-phenyl- (6CI) (CA INDEX NAME)

RN 102183-41-5 HCAPLUS

CN Isoquinoline, 1-chloro-3,4-diphenyl- (6CI, 9CI) (CA INDEX NAME)



L14 ANSWER 28 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1959:111808 HCAPLUS

DOCUMENT NUMBER: 53:111808

ORIGINAL REFERENCE NO.: 53:20063a-i,20064a

TITLE: Synthesis of isoquinoline derivatives

AUTHOR(S): Berti, Giancarlo; Corti, Piero

CORPORATE SOURCE: Univ. Pisa

SOURCE: Gazzetta Chimica Italiana (1958), 88, 704-13

CODEN: GCITA9; ISSN: 0016-5603

DOCUMENT TYPE: Journal LANGUAGE: Unavailable

OTHER SOURCE(S): CASREACT 53:111808
GI For diagram(s), see printed CA Issue.

AB cf. C.A. 47, 4341i. Cyclization of the amides 2- RHNCOC6H4CPh:CR':Cl (I) gave the isocarbostyrils, C6H4.CO.NR.CR'CPh (II), readily converted to the corresponding 4-phenyl-3-substituted-isoquinolines (III). Cyclization of 2-ClCOC6H4CPh:CPhCl (IV) with PCl5 gave 2,3-dichloro-2,3-diphenyl-1-indanone (V). SOCl2 (2 g.) and 1 g. 2-HO2CC6H4CPh:CEtCl (VI) refluxed, the solution evaporated in vacuo, the residue taken up in C6H6, the solution

10 min. with dry NH3, and the washed (H2O, dilute aqueous Na2CO3) and dried (MgSO4) solution concentrated and diluted with C6H6 gave 0.78 g. I (R = H, R' = Et)

(VII), m. 124-5° (C6H6-ligroine). VII (0.7 g.) in 20 ml. 10% KOH in (CH2OH)2 refluxed 75 min. and the cooled solution diluted with H2O gave 0.52 g. II (R = H, R' = Et) (VIII), m. 255-7°. Titration of the aqueous filtrate according to Volhard showed 92% transformation to ionic Cl. VIII (0.45 g.) and 1 g. POCl3 heated 20 min. on a steam bath, the cooled solution poured onto ice, made alkaline with NaOH, the product extracted with boiling C6H6.

the filtered extract evaporated to dryness, and the residue recrystd. (dilute MeOH)

gave 0.37 g. 1-chloro-3-ethyl-4-phenylisoquinoline, m. 69-70°, which, hydrogenated (0.25 g.) 30 min. in 20 ml. alc. with 0.5 g. Pd-CaCO3 in 5 ml. 10% alc. KOH, the solution saturated with CO2, filtered, evaporated to dryness and the residue crystallized (dilute alc.) gave 0.14 g. III (3-substituent = Et), m. 64-6°. VI (1 g.) and 1 g. PC15 heated to a homogeneous mass on a steam bath, taken up in C6H6, the solution washed rapidly with aqueous Na2CO3, treated with 1 g. PhNH2, the mixture boiled 10 min., the washed (HC1, H2O, aqueous Na2CO3) and dried (MgSO4) solution concentrated,

and the concentrate diluted with C6H6 and filtered gave 0.65 g. I (R = Ph, R' = Et), cyclized (0.2 g.) by refluxing 90 min. with 5 ml. 10% KOH in (CH2OH)2 to II (R = Ph, R' = Et), m. 187-9° (C6H6-ligroine), with 98.5 % conversion of the initial Cl to the ionic form. Crude V (9 g., obtained by chlorination of 2,3-phenyl-1-indanone according to DeFazi and Banchetti, C.A. 41, 7393f) refluxed 45 min. in 180 ml. 5% alc. KOH, concentrated

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to 45 ml., diluted with H2O, acidified with dilute H2SO4, the cooled product
     boiled 10 min. in C6H6 over C, and the decolorized filtered solution cooled
     gave 2.8 g. 2-HO2CC6H4CPh:CPhCl (IX), m. 199-201^{\circ}, converted (1.0 g.) by successive treatment with SOCl2 and NH3 to 0.85g. I (R = H, R' =
     Ph) (X), m. 199-201°. The mother liquors from IX diluted with petr. ether yielded 2.7 g. isomeric IX (Xa), m. 159-63°, similarly
     converted to the isomeric X (Xb), m. 154-6°. IX (1.5 g.) and 1 g.
     PC15 heated on a steam bath, the homogeneous solution taken up in C6H6,
     poured into H2O, the organic layer washed with aqueous Na2CO3 and H2O, and the
     dried solution concentrated and diluted with petr. ether gave authentic V,
converted
     by boiling 15 min. in MeOH to 2-chloro-3-methoxy-2,3-diphenyl-1-
     hydrindanone, m. 168-70^{\circ}. X (0.5 g.) refluxed 1 hr. in 15 ml. 10%
     KOH in (CH2OH)2 the cooled mixture diluted with H2O, filtered, and the product
     recrystd. (C6H6-ligroine) gave a compound, C28H24N2O2, m. 240-80°
     (decomposition, unchanged after sublimation at 1 mm.), also obtained by
     analogous treatment of Xb. The original aqueous filtrate acidified and
extracted
     with Et2O gave a partially resinous mixture giving a pos. test for BzOH. X
     (1.5 g.) and 0.8 g. finely powdered NaNH2 refluxed 45 min. in 20 ml. PhMe and
     the cooled clear yellow solution treated cautiously with H2O to decompose the
     excess NaNH2, the organic layer concentrated to 10 ml., and the product
recrystd.
     gave 0.8 g. II (R = H, R' = Ph) (XI), m. 250-2°, also similarly
     obtained from Xb. The stereoisomeric mixture of IX and Xa (2.5 g.) treated
     with 5 g. SOCl2, the product boiled 10 min. in C6H6 with 2 g. PhNH2, the
     washed (H2O, dilute HCl, aqueous Na2CO3) and dried (MgSO4) mixture distilled,
and the
     resinous product crystallized (MeOH) gave 1.1 g. I (R = R' = Ph) (XII), m.
     199-200°. The mother liquors evaporated to dryness and the residue
     crystallized (ligroine containing a small proportion of C6H6) gave. 1.4 g.
     prismatic XII, m. 130-2°. Attempts to cyclize XII with alc. KOH,
     KOH in (CH2OH)2, and NaNH2 in xylene were unsuccessful and XII was
     recovered. XI (0.4 g.) and 0.8 g. POC13 heated 40 min. on a steam bath,
     the cooled mixture decompd, on ice, made alkaline with NaOH, and the
precipitate
     crystallized (ligroine) gave 0.3 g. 1-chloro-3,4-diphenylisoquinoline, m.
     196-7°, hydrogenated (0.2 g.) in alc. with Pd-CaCO3 to yield 0.15
     g. III (3-substituent = Ph), m. 155-6^{\circ}. I (R = H, R' = Me) (1 g.)
     and 0.5 g. NaNH2 refluxed 30 min. in 10 ml. dry PhMe, the cooled yellow
     solution treated cautiously with H2O, filtered, the organometallic precipitate
     boiled 5 min. in 25% HCl, the cooled solution filtered, and the completely
     organic product (0.7 g.) washed and dried gave authentic II (R = H, R' = Me),
     m. 280-2^{\circ}, reduced catalytically to oily TII (3-substituent = Me);
     HCl salt, m. 228-31° (decomposition).
ΙT
     101602-30-6P, Isoquinoline, 1-chloro-3-ethyl-4-phenyl-
     102183-41-5P, Isoquinoline, 1-chloro-3,4-diphenyl-
     RL: PREP (Preparation)
        (preparation of)
RN
     101602-30-6 HCAPLUS
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Isoquinoline, 1-chloro-3-ethyl-4-phenyl- (6CI) (CA INDEX NAME)

CN

102183-41-5 HCAPLUS RN

CN Isoquinoline, 1-chloro-3,4-diphenyl- (6CI, 9CI) (CA INDEX NAME)

L14 ANSWER 29 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1958:88105 HCAPLUS

DOCUMENT NUMBER: 52:88105

ORIGINAL REFÉRENCE NO.: 52:15536f-i,15537a-h

TITLE:

New synthesis of 4-phenylisoquinoline and an attempt

to prepare 3-phenylisoquinoline

AUTHOR(S): Berti, Giancarlo

CORPORATE SOURCE:

Univ. Pisa

SOURCE: Gazzetta Chimica Italiana (1957), 87, 707-19

CODEN: GCITA9; ISSN: 0016-5603

DOCUMENT TYPE:

Unavailable LANGUAGE:

OTHER SOURCE(S): CASREACT 52:88105

cf. C.A. 47, 4341i. By the action of PC15 followed by treatment with NH3,

3-methyl-3-phenylphthalide (I) and o-(HO2C)C6H4CPh:CH2 (II) gave

o-(H2NCO)C6H4CPh:CHCl (III), cyclized by KOH to

Journal

4-phenylisocarbostyryl (IV) and converted to 4-phenylisoquinoline (V).

The same series of reactions with 3-benzylphthalide (VI) and

o-(HO2C)C6H4CH:CHPh (VII) failed to give the desired

3-phenylisoquinoline. MeMgI (from 16 g. MeI, 2.7 g. Mg, and 100 ml. Et20)

stirred with slow addition of 10 g. o-BzC6H4CO2H in 100 ml. Et2O, the

mixture refluxed 1 hr., stored overnight, decomposed with H2SO4 and ice, the Et20 layer washed with aqueous Na2S2O3 and NaOH, the dried extract evaporated,

and

the product crystallized (C6H6) gave 5 g. I, m. 79-81°. I treated with an equimol. amount of alc. 20% KOH, the solution evaporated, the residue dehydrated

at 230°, taken up in H2O, the solution filtered, acidified, and the crude precipitate taken up in aqueous Na2CO3 and repptd. with HCl gave 60-70%

 $134-6^{\circ}$  (50% AcOH) (cf. Bergmann, C.A. 33, 42257). I (5 g.) and 10 g. PC15 heated to 100° in 10 min. and to 140° in 1 hr., the

residue taken up in C6H6, the solution washed with aqueous Na2CO3 and saturated NaCl

and

solution, dried over CaCl2 saturated 15 min. with dry NH3, filtered from NH4Cl, and the concentrated filtrate diluted with petr. ether gave 2.7 g. III, m. 141-3° (petr. ether-CHCl3), also obtained by a similar procedure from II. III (2 g.) in 10 ml. 10% KOH in HO(CH2)2OH heated 1 hr. at 150°, cooled, and diluted with H2O gave 1 g. IV, m. 208-17°, converted by heating 15 min. at 100° with 2 parts POCl3, decomposing with ice, and alkalinizing with NaOH to 1-chloro-4-phenylisoquinoline (VIII), m.  $117-18^{\circ}$  (ligroine). III (0.25 g.) and 0.25 g. CrO3 in 8 ml. AcOH heated 30 min. at  $100^{\circ}$ , the cooled mixture taken up in Et20, and the washed and dried extract evaporated gave the known o-BzC6H4CONH2, m.  $158-60^{\circ}$  (PhMe). VIII (0.18 g.) in 20 ml. alc. treated with 4 ml. 10% alc. KOH and 0.4 g. PdO2-CaCO3, hydrogenated 40 min., the mixture filtered (CO2 atmospheric), and the filtrate evaporated gave 0.12 g. V, m.  $80-1^{\circ}$  (dilute alc.); picrate, m.  $208-10^{\circ}$  (PhMe) (cf. Krabbe, et al., C.A. 32, 21253). Treatment of VI and analogous benzylidene compound with PC15 gave  $3-(\alpha-chlorobenzylidene)$  phthalides and 3-chloro-3-( $\alpha$ -chlorobenzyl)phthalides. The presence of the H atom in position 3 seems to be incompatible with the production of the acid chloride. Accordingly, the above series of transformations was attempted with VII. VII (1 g.) and 2 g. PCl5 heated 30 min. at 100°, the cooled mixture diluted with C6H6 and H2O, the C6H6 layer washed with aqueous NaHCO3, filtered through a filter moistened with C6H6, the filtrate saturated 10 min. with dry NH3, and the product washed with H2O gave 0.5 g. o-H2NCOC6H4CH:CHPh (IX), m. 190-2° (cf. C.A. 50, 12929a). Working up the C6H6 filtrate gave 0.2 g. 4-chloro-3-phenyl-3,4dihydroisocoumarin (X), m. 106-10°. VII (7 g.) and 13.5 g. PC15 heated to 135° in 15 min., the temperature increased slowly to 160° in 1 hr. with distillation of 8.2 g. mixture of PCl3 and POCl3, the oily residue taken up in C6H6, the washed and dried solution saturated 30 min. with dry NH3, and the precipitate washed with H2O and crystallized (CHCl3-CCl4

C6H6) gave 2.5 g. o-PhCHClCHClC6H4CONH2 (XI), m. 146-8°, and a small amount IX. The initial C6H6 filtrate evaporated and the residue crystallized (MeOH and C6H6-ligroine) yielded 1 g. X. VII (2 g.) in 30 ml. CHCl3 saturated 30 min. with dry Cl, the solution washed with aqueous Na2CO3, dried

over MgSO4, evaporated, and the residue recrystd. (C6H6-ligroine) gave 1.85 g. X. Chlorination under various conditions gave invariably X and never the o-HO2CC6H4CHClCHClPh. X (0.2 g.) heated in a metal bath to 250° and the residue crystallized from a small volume of alc. and from ligroine yielded 3-phenylisocoumarin, m. 89-90°, converted by boiling with concentrated NaOH and acidification of the cooled solution to o-BzCH2C6H4CO2H, m. 160° (decomposition). X (0.6 g.) in 30 ml. alc. hydrogenated 45 min. with 0.15 g. 5% Pd-C at 20°/760, the mixture filtered, the filtrate evaporated, the residue extracted with aqueous

filtered, and the alkali-insol. residue crystallized (dilute alc.) gave authentic

3-phenyl-3,4-dihydroisocoumarin, m. 89-90°. The alkaline filtrate acidified, filtered, and the mixture of crude acids (0.25 g.) containing Cl twice recrystd. (C6H6-ligroine) gave needles of o-PhCH2CH2C6H4CO2H, m. 129-30°; amide, m. 128°, produced by reduction of IX with 5% Pd-C or by similar reduction of IX. XI (1.4 g.) heated 6 min. at  $150-60^{\circ}/14$ , the yellow residue extracted twice with 20 ml. C6H6, and the insol. material crystallized (AcOH) gave 0.85 g. mixture

of 3-benzylidene-1-imino-1,3-dihydroisobenzofuran and 1-imino-3-phenyl-2,1H-benzopyran HCl salts, m.  $210-15^{\circ}$  (decomposition). XII (0.3 g.) heated 15 min. in 10 ml. N HCl at 100° and the cooled mixture

filtered gave 0.2 g. VI (alc.). The alc. mother liquor boiled 5 min. with NaOH, the solution diluted with H2O, acidified, filtered, and the precipitate crystallized

(dilute alc.) yielded o-BzCH2C6H4CO2H (XIII), m. 160-2°. XII

(0.3 g.) taken up in 2N NaOH, the mixture kept several hrs. at room temperature,

filtered, and the residue crystallized (alc.) gave 0.1 g. o-BzCH2C6H4CN (XIIIa), m. 109-11°. Acidification of the filtrate and crystallization of the precipitate (alc.) yielded 3-benzylidenephthalimidine (XIV), m. 181°. XIIIa (0.1 g.) in 2 ml. anhydrous MeOH saturated with dry HCl, poured into H2O, the solution heated on a steam bath 10 min., cooled, extracted with Et2O, the extract evaporated, the residue taken up in 3 ml. N alc. KOH, boiled 10 min., diluted with H2O, extracted with Et2O, the aqueous solution acidified,

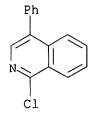
filtered when

cool, and the product crystallized gave XIII. XI (0.5 g.) in 15 ml. alc. and 10 ml. 8% alc. KOH boiled 4 min. and diluted with H2O gave 0.35 g. o-PhCH:CClC6H4CONH2, m. 134-6° (C6H6-ligroine). XI (1 g.) in 50 ml. 10% alc. KOH refluxed 2 hrs. and poured into H2O gave 0.7 g. Cl-free product, crystallized (alc. and C6H6-ligroine) to give 0.15 g. XIV. Working up the mother liquors yielded a mixture of products, C15H11NO. 65810-96-0P, Isoquinoline, 1-chloro-4-phenyl-

RL: PREP (Preparation) (preparation of)

RN 65810-96-0 HCAPLUS

CN Isoquinoline, 1-chloro-4-phenyl- (6CI, 9CI) (CA INDEX NAME)



IT

L14 ANSWER 30 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1953:66025 HCAPLUS

DOCUMENT NUMBER: 47:66025

ORIGINAL REFERENCE NO.: 47:11202a-i,11203a-i,11204a-i,11205a-d

TITLE: Isoquinoline derivatives as local anesthetics

AUTHOR(S): Anderson, Elvin L.; Wilson, James W.; Ullyot, Glenn E.

CORPORATE SOURCE: Smith, Kline, and French Labs., Philadelphia, PA
SOURCE: Journal of the American Pharmaceutical Association,

Scientific Edition (1952), 41, 643-50

CODEN: JAPMA8; ISSN: 0095-9553

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable GI For diagram(s), see printed CA Issue.

AB cf. C.A. 45, 42712. Various 1-(aminoalkoxy)isoquinoline derivs. and the appropriate 1-chloroisoquinoline intermediates are described. The effect of structural variations is reported. In general, local anesthetic activity was maximum when the isoquinoline was substituted in the 3-position by a Bu group and in the 1-position by a (1-methyl-3-piperidyloxy) group. Increasing the size of the 3-alkyl substituent was without effect.

Further modification of this group, such as branching or the substitution of aryl or aralkyl groups, decreased the activity, as did also alterations

of the basic side-chain. In general, the dimethylaminoethoxy side-chain was the most effective of nonheterocyclic structures. Replacement of the O ether linkage with either S or N lowered the activity. The introduction of alkyl, alkoxy, amino, acetamido, or halo groups, not only lowered the activity, but increased the toxicity and irritation. The required amino alcs. were prepared by known methods. Thus, 2,2,4,6-tetramethyl-1piperidineethanol, b11 126-8°, nD23 1.4817, was prepared from 2,2,4,6-tetramethylpiperidine and ClCH2CH2OH. 2-Hexyl-1-piperidineethanol b0.3 100-4° (nD23 1.4760). Most of the intermediate substituted isoquinolones were prepared from (1) the appropriate 1-amino-1-(3phthalidyl)alkanes or (2) by cyclization of phenethyl isocyanates with AlC13 to tetrahydroisoquinolones followed by dehydrogenation. Thus, Et 3,4-dimethoxyphenethylcarbamate (I), b4 176-8°, was prepared by treating 181 g. (1 mole) of 3,4-(MeO) 2C6H3CH2CH2NH2 in 250 cc. dry C6H6 with 54.5 g. (0.5 mole) ClCO2Et in 100 cc. dry C6H6 over 45 min. at 50° with stirring, stirring 30 min. at 50°, extracting the mixture with H2O, then with saturated NaHCO3 solution, distilling off the C6H6, and distilling

the residue I (51 g.) (0.2 mole) was gently refluxed 3 hrs. with 100 g. (0.7 mole) POC13 and 7 g. P2O5, the mixture hydrolyzed with ice, made alkaline with excess 40% NaOH, and the product extracted with CHCl3, and recrystd. from MeCOEt, giving 6,7-dimethoxy-3,4-dihydro1(2H)-isoquinolone (II). II (2 g.) and 0.3 g. 30% Pd-C catalyst heated from 200° to 240° over 30 min. while dry N was bubbled into the mixture gave 6,7-dimethoxy-1(2H)isoquinolone, m. 237-8° (from CHC13). (PhCH2)2CHNH2, prepared from (PhCH2)2CO by the Leuckart reaction, was converted with COCl2 in PhNO2 to 2,2-diphenylisopropyl isocyanate (III), b15 197°, which with NH3 gave the unsym. urea, m. 138-8.5°. A mixture of 28 g. (0.08 mole) AlCl3 in 150 cc. PhNO2 and 20 g. (0.08 mole) III stirred 3 hrs. at 75°, allowed to cool, poured slowly into 250 cc. ice water, the whole extracted with CHCl3, and the solvents distilled in vacuo gave 3-benzyl-3,4-dihydro-1(2H)-isoquinolone (IV), m.148-8.5° (from dilute EtOH). Dehydrogenation of IV 6 hrs. at 305-20° gave 3-benzyl-1(2H)-isoquinolone, m. 192-3 $^{\circ}$  (from iso-PrOH). p-BuC6H4CH2Cl with KCN gave p-BuC6H4CH2CN (V), b19 163-5°, nD23  $\,$ 1.5061, hydrolyzed with 50% H2SO4 to p-BuC6H4CO2H, m. 73-4.5° (from dilute EtOH). V (112 g.) in 725 cc. MeOH saturated with NH3 reduced over Raney Ni at room temperature and an initial pressure of 1420 lb./sq. in., gave 92% (p-butylphenethylamine) (VI), b20 146-51°, nD24 1.5105-1.5132; VI.HCl m. 184-5.5°. VI with COC12 yielded 92% p-butylphenethyl isocyanate (VII), b16 150-6°, nD24 1.5060-1.5068. Cyclization of VII by AlCl3 as above gave 7-butyl-3,4-dihydro-1(2H)-isoquinolone, b0.5 180-3°; nD24 1.5545, m. 45-6°, dehydrogenated to 7-butyl-1(2H)-isoquinolone, m. 127.5-9° (from dilute EtOH). Treatment of p-MeOC6H4CH2CHMeNH2 with COC12 yielded the isocyanate, b3 112-13°, nD23 1.5168, which gave with concentrated NH4OH, presumably the urea derivative, m. 169-70° (from dilute EtOH). Cyclization of the isocyanate, with the temperature kept at 45°, yielded 3-methyl-7-methoxy-3,4-dihydro-1(2H)-isoquinolone, m. 149-50° (from iso-PrOH). Dehydrogenation 4 hrs. at 250-60° gave 3-methyl-7-methoxy-1(2H)-isoquinolone, m.  $140-\bar{1}^{\circ}$  (from EtOH). The 1-chloroisoguinolines were obtained from the isoguinolones with POC13 or from the appropriate isoquinoline N-oxide or N-oxide-HCl with POCl3. The position of the entering Cl was established as follows: 1-chloro-3-ethylisoquinoline (VIII) dehalogenated over Raney Ni gave 3-ethylisoquinoline (IX); picrate, 173-3.5° (reported 171-2°). IX treated with H2O2 and AcOH gave 3-ethylisoquinoline N-oxide-HCL, m. 203-3.5°, and the N-oxide with POC13 gave VIII which, when refluxed with dilute H2SO4, yielded 3-ethyl-1(2H)-isoquinolone,

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m. 139-140°, alone and with an authentic sample.
       3-Methyl-4-butylisoquinoline N-oxide-HCl(prepared by H2O2-AcOH oxidation of
       the isoquinoline), m. 196-8°. 3-Methyl-4-propylisoquinoline
       N-oxide (X), m. 114-15°; X.HCl, m. 212-15°. The aminoalkyl
       ethers were prepared as previously described. The following x-substituted
       1-chloroisoquinolines [yields (%) in parentheses] were prepared: 3-iso-Bu,
       b0.3 125-6°, nD23 1.5841 (73); 3-Am, b2 142-4°, nD24 1.5874
       (78); 3-hexyl, b0.3 151-3°, nD23 1.5701 (62); 3-Ph, m. 76-8°
       (81); 4-Ph, m. 114-15.5° (100); 3-PhCH2, b0.5 180-2°
       1.6642 (74); 4-Br, m. 97.5-8° (85); 5-O2N, m. 183-4° (57); 5-H2N, m. 175-6° (77): 3 5-F+(O2N) -- 00 5 0 70
       1.6642 (74); 4-BI, m. 97.3-8 (65); 3-O2N, m. 163-4 (57); 5-H2N, m. 175-6° (77); 3,5-Et (O2N), m. 92.5-3.5° (89); 3,5-Et (H2N), m. 124-5° (83); 7-Bu, b0.5 134-6°, nD23 1.5872 (85); 6,7-(MeO)2, m. 155-60° (-) (picrate, m. 190-1°); 3,7-Me (MeO), m. 111-12° (39); 3,6,7-EtMe2, b2.5 155-6°, nD25 1.6050 (33) (picrate m. 114.5-15°); 3,4-MePr, b1.5 143-5°, nD20 1.6005 (78); 3,4-MeBu, b2 158-60°, nD28 1.5874 (51);
       3,7-Et(H2N), m. 145-5.5° (73).
65810-96-0P, Isoquinoline, 1-chloro-4-phenyl-
IT
       RL: PREP (Preparation)
            (preparation of)
RN
       65810-96-0 HCAPLUS
CN
       Isoquinoline, 1-chloro-4-phenyl- (6CI, 9CI) (CA INDEX NAME)
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L14 ANSWER 31 OF 31 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:
                           1953:25387 HCAPLUS
DOCUMENT NUMBER:
                           47:25387
ORIGINAL REFERENCE NO.:
                           47:4341h-i,4342a-f
TITLE:
                           A new method of synthesis of derivatives of
                           isoquinoline. A preliminary note
AUTHOR(S):
                           Berti, Giancarlo
CORPORATE SOURCE:
                           Univ. Pisa, Italy
SOURCE:
                           Gazzetta Chimica Italiana (1951), 81, 868-74
                           CODEN: GCITA9; ISSN: 0016-5603
DOCUMENT TYPE:
                           Journal
LANGUAGE:
                           Unavailable
                           CASREACT 47:25387
OTHER SOURCE(S):
     For diagram(s), see printed CA Issue.
GT
AB
     Treatment of certain amides of o-PhCH2CCl:CHC6H4CO2H (I) with KOH
     eliminates 1 HCl mol. and results in cyclization involving the
     o-C-CC6H4C-N group, with formation of derivs. of iso-carbostyril.
     reaction is of great interest because it represents a wholly new method of
     synthesis of the bicyclic isoquinoline (II) system and makes possible the
     preparation of complex derivs. of II. 3-Ethyl-3-phenylphthalide (III) (2 g.)
     and 4 g. PCl5, heated 1 hr. at 120°, diluted with C6H6, poured into
     ice water, agitated 1 min., the C6H6 solution washed with cold aqueous Na2CO3, the C6H6 solution filtered, NH3 gas passed through for 30 min., the mixture
     filtered, concentrated, ligroine added, and the precipitate (1.2 g.) purified
by MeOH
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or ligroine-C6H6, yields the amide, C16H14ONCl (IV), of I, m. 135-6°. A smaller yield is obtained by adding concentrated NH4OH to the acid chloride (V), in C6H6 and boiling off the C6H6. A solution of V (from 1 g. III) treated with 2 g. MeNH3Cl, 20% aqueous NaOH added dropwise, the C6H6 layer washed with dilute HCl, concentrated, diluted with ligroine, and the precipitate (0.6

g.) purified by aqueous EtOH, yields the N-methylamide, C17H16ONCl (VI), of I, m.  $148-52^{\circ}$ . It is a mixture of 2 isomers, with that corresponding to the acid m.  $194-5^{\circ}$  in the major proportion. IV (0.8 g.) in 10 cc.

10% alc. KOH, refluxed 4 hrs. (KCl ppts.), diluted with water, and the precipitate

purified by C6H6, yields 0.6 g. of 3-methyl-4-phenyliso-carbostyril (VII), m. 292-4°. VII (0.3 g.) and 0.2 g. POCl3, refluxed 30 min., poured into ice water, made alkaline with NaOH, extracted with Et2O, the extract evaporated, and

the residue purified by hot EtOH, yield 0.27 g. 1-chloro-3-methyl-4-phenylisoquinoline (VIII), m. 100-101°. VIII (0.5 g.), 0.3 g. red P, and 3.5 cc. HI (b. 127°), heated 3 hrs. in a sealed tube at 165-70°, taken up in boiling water, filtered hot, the filtrate made alkaline with NaOH, and the flocculent oily precipitate dissolved in aqueous

repptd. by NaOH, yield 3-methyl-4-phenylisoquinoline (IX), ultraviolet absorption maximum in EtOH 270, 315, and 331 m $\mu$  (maximum of isoquinoline 267, 305, and 318); hence the bathochromic effect of the Ph group is evident. An aqueous suspension of IX extracted with C6H6, the extract evaporated, the residue

taken up in EtOH, alc. picric acid added, the solution concentrated, and the precipitate

purified by EtOH, yields the picrate, C16H13N.C6H3O7N3, m. 195°. o-PhCH2CCl:CHC6H4CONHPh (X) (0.356 g.) and 12 cc. 8% alc. KOH, refluxed 3 hrs., water added, and the precipitate purified by MeOH, yield 0.302 g. of 2,4-diphenyl-3-methylisocarbostyril (XI), m. 222-4°. Titration with AgNO3 of the dilute alc. solution before purification indicated a 93% yield of XI. XI is formed from both forms of X, m.  $120-1^{\circ}$  and 143-5° (cf. Freiser and Glowacki, C.A. 43, 5784c). VI (0.5 g.) and 10 cc. 10% alc. KOH, refluxed 3 hrs. (KCl seps.), diluted with water, and the precipitate (0.42 g.) purified by MeOH, yield 2,3-dimethyl-4phenylisocarbostyril, C6H4.CO.NMe.CMe:CPh, m. 214-15°. Titration of the solution indicated an 80% yield. The only drawback at present to this method of synthesis is the preparation of the substituted o-(2chlorovinyl)benzoic acids, only 3 of which have been described and low yields reported. However, recent work (cf. de Fazi and Carboni, C.A. 43, 2610e; D. and B., C.A. 44, 7298c; B., C.A. 46, 5015e) gives promise of surmounting this difficulty.

RN 101423-02-3 HCAPLUS

CN Isoquinoline, 1-chloro-3-methyl-4-phenyl- (6CI) (CA INDEX NAME)

=> file caold SINCE FILE COST IN U.S. DOLLARS TOTAL ENTRY SESSION FULL ESTIMATED COST 189.51 717.04 DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION CA SUBSCRIBER PRICE -25.74-26.52

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FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

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### => d his

L1

L6

(FILE 'HOME' ENTERED AT 01:26:17 ON 20 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:26:30 ON 20 SEP 2007 STRUCTURE UPLOADED

L2 0 S L1

L3 1 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 01:29:18 ON 20 SEP 2007 L4 1 S L3

FILE 'CAOLD' ENTERED AT 01:29:31 ON 20 SEP 2007 L5 0 S L3

STRUCTURE UPLOADED

FILE 'REGISTRY' ENTERED AT 01:29:39 ON 20 SEP 2007

L7 0 S L6

L8 1 S L6 FULL

L9 STRUCTURE UPLOADED

L10 7 S L9

L11 78 S L9 FULL

FILE 'HCAPLUS' ENTERED AT 01:32:04 ON 20 SEP 2007

L12 33 S L11

L13 2 S L12 AND TROTTER, B?/AU

L14 31 S L12 NOT L13

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O S L14 AND NANDA, K?/AU
L15
L16
              0 S L14 AND KETT, N?/AU
              0 S L14 AND DINSMORE, C?/AU
L17
              0 S L14 AND PONTICELLO, G?/AU
L18
              0 S L14 AND CLAREMON, D?/AU
L19
     FILE 'CAOLD' ENTERED AT 01:35:35 ON 20 SEP 2007
=> s 111
L20
             3 L11
=> d 120, all, 1-3
L20 ANSWER 1 OF 3 CAOLD COPYRIGHT 2007 ACS on STN
     CA54:14934f CAOLD
ΑN
     ultraviolet spectra of derivs. of 3- and 4-phenylisoquinoline
ΤI
ΑU
     Berti, Giancarlo; Corti, P.
                                 3681-64-9
                                                           4581-49-1
IT
       491-30-5
                   1741-39-5
                                              4581-48-0
     4666-81-3
                  4677-87-6
                                7115-13-1
                                            16769-57-6
                                                         19571-30-3
                                                                      31538-72-4
                                                          65810-96-0
     36828-24-7
                  37993-76-3
                                52839-45-9
                                            55150-54-4
                               98089-17-9 101423-02-3
     91426-59-4
                  93119-96-1
     101602-30-6 102183-41-5 102466-77-3 108979-41-5
     108981-22-2
L20 ANSWER 2 OF 3 CAOLD COPYRIGHT 2007 ACS on STN
AN
     CA53:20063a CAOLD
     synthesis of isoquinoline derivs.
ΤI
     Berti, Giancarlo; Corti, P.
ΑU
                               52839-45-9
                                            53133-95-2
                                                          93119-96-1
       496-10-6
                 40182-22-7
IT
     98089-17-9 101571-14-6 101602-30-6 102183-41-5
     102451-79-6 102466-63-7 102467-48-1 102590-56-7 103035-62-7
     108979-41-5 114795-39-0
L20 ANSWER 3 OF 3 CAOLD COPYRIGHT 2007 ACS on STN
     CA52:15536f CAOLD
· AN
     synthesis of 4-phenylisoquinoline and an attempt to prepare
ΤI
     3-phenylisoquinoline
ΑU
     Berti, Giancarlo
                                4809-08-9
                                              4890-85-1
                                                           5194-47-8
TΤ
      2674-44-4
                   2881-31-4
                   17582-84-2
                                18019-56-2
                                             19571-30-3
                                                          36795-31-0
     10517-64-3
                                             65810-96-0 100865-28-9
                   37993-76-3
                                63404-82-0
     36828-24-7
     100954-88-9 101096-27-9 109365-99-3
                                            110155-83-4
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                                                  SINCE FILE
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FULL ESTIMATED COST
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
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                                                                  TOTAL
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CA SUBSCRIBER PRICE
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=> S 65810-96-0/RN

L21 1 65810-96-0/RN

=> SET NOTICE 1 DISPLAY

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=> D L21 SQIDE 1-

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L21 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN

RN 65810-96-0 REGISTRY

Isoquinoline, 1-chloro-4-phenyl- (6CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

1-Chloro-4-phenylisoquinoline CN

MF C15 H10 C1 N

BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, TOXCENTER, USPATFULL LCSTN Files: (\*File contains numerically searchable property data)

CAplus document type: Journal; Patent DT.CA

Roles from patents: PREP (Preparation); RACT (Reactant or reagent) RL.P

Roles from non-patents: BIOL (Biological study); PREP (Preparation); RL.NP RACT (Reactant or reagent); NORL (No role in record)

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 6 REFERENCES IN FILE CA (1907 TO DATE)
- 6 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)
- => SET NOTICE LOGIN DISPLAY

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=>

=> FIL REGISTRY

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 2.40 721.96 DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION CA SUBSCRIBER PRICE 0.00 -26.52

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STRUCTURE FILE UPDATES: 18 SEP 2007 HIGHEST RN 947490-11-1 DICTIONARY FILE UPDATES: 18 SEP 2007 HIGHEST RN 947490-11-1

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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http://www.cas.org/support/stngen/stndoc/properties.html

=> S 101423-02-3/RN

L22 1 101423-02-3/RN

=> SET NOTICE 1 DISPLAY

NOTICE SET TO 1 U.S. DOLLAR FOR DISPLAY COMMAND SET COMMAND COMPLETED

=> D L22 SQIDE 1-

YOU HAVE REQUESTED DATA FROM 1 ANSWERS - CONTINUE? Y/(N):Y THE ESTIMATED COST FOR THIS REQUEST IS 6.55 U.S. DOLLARS DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L22 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN

RN 101423-02-3 REGISTRY

CN Isoquinoline, 1-chloro-3-methyl-4-phenyl- (6CI) (CA INDEX NAME)

MF C16 H12 Cl N

SR CAOLD

LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS

(\*File contains numerically searchable property data)

DT.CA CAplus document type: Journal .

RL.NP Roles from non-patents: PREP (Preparation); NORL `(No role in record)

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 2 REFERENCES IN FILE CA (1907 TO DATE)
- . 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)
  - 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

#### => SET NOTICE LOGIN DISPLAY

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=> FIL REGISTRY

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Updated Search

STRUCTURE FILE UPDATES: 18 SEP 2007 HIGHEST RN 947490-11-1 DICTIONARY FILE UPDATES: 18 SEP 2007 HIGHEST RN 947490-11-1

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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http://www.cas.org/support/stngen/stndoc/properties.html

=> S 101602-30-6/RN

L23 1 101602-30-6/RN

=> SET NOTICE 1 DISPLAY

NOTICE SET TO 1 U.S. DOLLAR FOR DISPLAY COMMAND SET COMMAND COMPLETED

=> D L23 SQIDE 1-

YOU HAVE REQUESTED DATA FROM 1 ANSWERS - CONTINUE? Y/(N): Y THE ESTIMATED COST FOR THIS REQUEST IS 6.55 U.S. DOLLARS DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L23 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN

RN 101602-30-6 REGISTRY

CN Isoquinoline, 1-chloro-3-ethyl-4-phenyl- (6CI) (CA INDEX NAME)

MF C17 H14 C1 N

SR CAOLD

LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS

(\*File contains numerically searchable property data)

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); NORL (No role in record)

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 2 REFERENCES IN FILE CA (1907 TO DATE)
- 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

# 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> SET NOTICE LOGIN DISPLAY

NOTICE SET TO OFF FOR DISPLAY COMMAND SET COMMAND COMPLETED

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